THE ASTROPHYSICAL JOURNAL

AUTHOR INDEX

PARTS 1 & 2, VOLUMES 387-389

1992 MARCH 1 TO APRIL 20

ADAMS, FRED C. A Topological/Geometrical Approach to the Study of Astrophysical Maps. Fred C. Adams. 387, 572, 45-G1 (1992)

AGGARWAL, K. M. Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)

AGUILAR, LUIS. Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362,

54-G8 (1992) ALSOP, D. C. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.

ALTROCK, R. C. Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)

ARENDT, S. Large-Scale Flows and Solar Luminosity Variations.

S. Arendt. 389, 421, 65-B6 (1992)

ARENS, JOHN. Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 387, L17, 43-B13 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9

ARENS, JOHN F. Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

ARONS, JONATHAN. Photon Bubbles: Overstability in a Magnetized Atmosphere. Jonathan Arons. 388, 561, 57-C1 (1992)

ARTYMOWICZ, PAWEŁ. Dynamics of Ultraharmonic Resonances in Spiral Galaxies. Paweł Artymowicz & Stephen H. Lubow. 389, 129, 61-F1 (1992)

ASPIN, C. The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)

AVERY, L. W. Warm Molecular Gas in the Nucleus of IC 342: The CO $(J=3\rightarrow 2)$ Distribution. Judith A. Irwin & L. W. Avery. 388, 328, 54-D7 (1992)

BAHCALL, J. N. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

BAHCALL, JOHN N. Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234,

62-G9 (1992)

BAHCALL, N. A. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

BAI, T. The 77 Day Periodicity in the Flare Rate of Cycle 22. T. Bai. 388, L69, 59-D3 (1992)

BAILES, M. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)

BALL, ROGER. Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 387, L17, 43-B13 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9

Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

LET, J. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.

See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

BALLY, J. Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

BANIT, MENASHE. Orbital Angular Momentum Loss in PSR 1957+20. Menashe Banit & Jacob Shaham. 388, L19, 52-B11 (1992)

BARKER, EDWIN S. Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)

BARKER, JOHN R. Infrared Emission Spectra of Benzene and Naphthalene: Implications for the Interstellar Polycyclic Aromatic Hydrocarbon Hypothesis. Jerrell D. Brenner & John R. Barker. 388, L39, 52-D6 (1992)

BARNES, PETER J. Orion B (NGC 2024). III. BIMA SO $J_K = 2_2 \rightarrow 1_1$ Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)

RET, D. See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

BASTIAN, T. S. Detection of the H92α Radio Recombination Line from the Symbiotic Star H1-36 Arae. T. S. Bastian. 387, L77, 48-D1 (1992)

BATRLA, WOLFGANG. Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992)

BAUM, S. A. Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies: Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

BAYM, GORDON. Vortex Drag and the Spin-up Time Scale for Pulsar Glitches. Richard I. Epstein & Gordon Baym. 387, 276, 40-D1

BEAKY, MATTHEW M. Topology of Large-Scale Structure in Seeded Hot Dark Matter Models. Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443, 44-C1 (1992)

BECKLIN, E. E. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)

BEER, HERMANN. A Measurement of the $^{14}C(n,\gamma)^{15}C$ Cross Section at a Stellar Temperature of kT=23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)

Measurement of the ⁷⁶Se(n, γ) Capture Cross Section and Phenomenological s-Process Studies: The Weak Component.

Hermann Beer, G. Walter, & F. Käppeler. 389, 784, 71-B1 (1992)

Bell, R. A. CN and CH Variations on the M5 Subgiant Branch.

Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)

BENSON, J. A. 10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8 (1992)

BENZ, W. Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)

BENZ, WILLY. Postexplosion Hydrodynamics of SN 1987A. Marc

Herant & Willy Benz. 387, 294, 40-E9 (1992) BERGERON, P. On the Influence of the Convective Efficiency on the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1

BERRINGTON, K. A. Improved Calculations for the C III λλ1907,1909 and Si III $\lambda\lambda$ 1883,1892 Electron Density Sensitive Emission-Line Ratios, and a Comparison with IUE Observations. F. P. Keenan, W. A. Feibelman, & K. A. Berrington. 389, 443, 65-D5 (1992)

BERTELLI, G. On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Benelli, & A. Bressan. 387, 320, 41-A1 (1992)
BERTELLI, GIANPAOLO. The Star Formation History of the Large

Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)

BERTOLDI, FRANK. Dense Clumps of Ionized Gas near π Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins. 388, 495, 56-D9 (1992)

BESSELL, M. S. Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)

BHATIA, V. B. Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, &

N. Panchapakesan. 388, 131, 50-F1 (1992)

BIGNAMI, GIOVANNI F. On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ring-shaped Supernova Remnant. Giovanni F. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)

BJORKMAN, K. S. The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6

(1992)

BLACK, JOHN H. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)

BLAND-HAWTHORN, JONATHAN. The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503,

45-A1 (1992)

BLUMENTHAL, G. R. The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)

BLUMENTHAL, GEORGE R. The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510,

67-G1 (1992)

BOESGAARD, ANN MERCHANT. Chemical Composition of Open Clusters. III. Iron and Carbon in F Dwarfs in Coma, Praesepe, and M67. Eileen D. Friel & Ann Merchant Boesgaard. 387, 170, 39-A13 (1992)

BOTHUN, GREGORY D. Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388,

253, 53-D10 (1992) BOUCHET, L See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

BRADT, H. V. H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)

BRANDUARDI-RAYMONT, G. Spatially Resolved Ultraviolet Spec-G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)

BREGMAN, JOEL N. Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484,

44-F9 (1992)

BRENNER, JERRELL D. Infrared Emission Spectra of Benzene and Naphthalene: Implications for the Interstellar Polycyclic Aromatic Hydrocarbon Hypothesis. Jerrell D. Brenner & John R. Barker. 388, L39, 52-D6 (1992)

BRESSAN, A. On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)

BRESSAN, ALESSANDRO. The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)

BRILEY, MICHAEL M. CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke,

& James H. Hesser. 387, 612, 46-C5 (1992)

Brown, Larry W. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

BROWN, LAWRENCE E. Possible Sources of the Population I Lithium Abundance and Light-Element Evolution. Lawrence E. Brown.

389, 251, 63-B1 (1992)

BRYIA, CLAIA. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)

BUCHHORN, M. No Back-Side Infall into the Great Attractor. D. S. Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992)

BURBIDGE, E. MARGARET. Detection of Ca II Absorption in the OSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

BURGARELLA, DENIS. The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

BURKE, BERNARD F. Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)

BURNS, JACK O. Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)

Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

Busso, M. s-Processing in Massive Stars as a Function of Metallicity and Interpretation of Observational Trends. C. M. Raiteri, R. Gallino, & M. Busso. 387, 263, 40-C1 (1992)

CAIRNS, I. H. Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)

CANUTO, V. M. Further Improvements of a New Model for Turbulent Convection in Stars. V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1

CAPPELLARO, E. Modeling the Iron-dominated Spectra of the Type la Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

CARAVEO, PATRIZIA A. On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ring-shaped Supernova Remnant. Giovanni F. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)

CARLBERG, R. G. Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)

CARLSON, BARBARA E. The Abundance and Distribution of Water Vapor in the Jovian Troposphere as Inferred from Voyager IRIS Observations. Barbara E. Carlson, Andrew A. Lacis, & William B. Rossow. 388, 648, 58-C7 (1992)

CASTELLANI, MARCO. The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco Castellani, Marco Limongi, & Amedeo Tornambè.

389, 227, 62-G1 (1992)

CASTOR, JOHN I. A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)

- CASTRO, CATARINA. First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)
- CAULET, ADELINE. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)
- CAWTHORNE, T. V. A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)
- CELLONE, SERGIO A. Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)
- CHABOYER, BRIAN. The Effect of Helium Diffusion on the Ages of Globular Clusters. Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H. Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)
- CHAFFEE, F. H. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, &
- P. Magain. 389, 39, 60-E1 (1992)
 CHAKRABARTI, SANDIP K. Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)
- CHAN, KWING L. Downflows and Entropy Gradient Reversal in Deep
- Convection. Kwing L. Chan & Detlef Gigas. 389, L87, 73-F3 (1992) CHARBONNEAU, P. Angular Momentum Transport in Magnetized Stellar Radiative Zones. I. Numerical Solutions to the Core Spin-up Model Problem. P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)
- CHEN, WAN. mo-Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6 (1992)
- CHEN, WEN PING. 10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, LA3, 43-E8 (1992)
- CHENG, E. S. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- CHENG, F. H. Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)
- CHERNIN, LAWRENCE M. Properties of Swept-up Molecular Outflows. Colin R. Masson & Lawrence M. Chernin. 387, L47, 43-F1 (1992)
- CHIOSI, C. On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)
- CHIOSI, CESARE. The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)
- CHOPRA, NAMRATA. Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, & N. Panchapakesan. 388, 131, 50-F1 (1992)
 CHRISTODOULOU, DIMITRIS M. The Stability of Accretion Tori. IV.
- Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1
- CHRISTON, S. P. Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389,
- 791, 71-B10 (1992) JRAZOV, E. See SUNYAEV, R., et al. X-Ray Nova in Musca CHURAZOV, E. (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- CIARDULLO, ROBIN. Planetary Nebulae as Standard Candles. VIII. Evidence for a Change in the Luminosity Function Cutoff at Low Metallicity. Robin Ciardullo & George H. Jacoby. 388, 268, 53-F1
- CLAPP, A. C. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.

- CLARKE, DAVID A. Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)
- CLIVER, EDWARD W. Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Dröge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992)
- CLOCCHIATTI, ALEJANDRO. Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11
- COCHRAN, ANITA L. Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)
- COCHEAN, WILLIAM D. Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)
- COLPI, M. Rotational Properties of Strange Stars. M. Colpi & J. C. Miller. 388, 513, 56-F1 (1992)
- CONLON, E. S. Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)
- CONNER, SAMUEL R. Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)
- CONTOPOULOS, G. A Rotating Stäckel Potential. G. Contopoulos & Peter O. Vandervoort. 389, 118, 61-E1 (1992)
- COOK, J. W. Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)
- COOPER, MICHAEL A. Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)
- CORCORAN, M. F. Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)
- CORDES, J. M. Determining the Coherence of Micropulses. T. E. Strohmayer, J. M. Cordes, & H. M. Van Horn. 389, 685, 69-G12
- (1992) CORDIER, B. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- COTTINGHAM, D. A. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- COUCHMAN, H. M. P. Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)
- COVAULT, C. E. Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4. C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)
- CRUTCHER, RICHARD M. Orion B (NGC 2024). III. BIMA SO $J_K =$ 22 → 11 Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)
- DA COSTA, L. NICOLACI. The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)
- D'AMICO, N. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)
- DANZIGER, I. J. Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

DAR, ARNON. Gamma-Ray Bursts and Cosmic Rays from Accretioninduced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)

DAVID, L. P. X-Ray Properties of Bright Far-Infrared Galaxies. L. P. David, C. Jones, & W. Forman. 388, 82, 50-B4 (1992)

DAVID, LAURENCE P. The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510, 67-G1 (1992)

DAVIDSON, J. A. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)

M. Morris. 387, 189, 39-C8 (1992)

DAVILA, JOSEPH M. A Rotating Tomographic Imager for Solar Extreme-Ultraviolet/Soft X-Ray Emission. Joseph M. Davila & W. T. Thompson. 389, L91, 73-F8 (1992)

DAVIS, MARC. The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)

DEBRUNNER, H. The Solar Flare Event on 1990 May 24: Evidence for Two Separate Particle Accelerations. H. Debrunner, J. A. Lockwood, & J. M. Ryan. 387, L51, 43-F7 (1992)

DE CARVALHO, R. R. Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11 (1992)

DE FELICE, FERNANDO. Rotating Stars: The Angular Momentum Constraints. Fernando de Felice & Leonardo Di G. Sigalotti. 389, 386, 64-F7 (1992)

DELIYANNIS, CONSTANTINE P. Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)

The Effect of Helium Diffusion on the Ages of Globular Clusters.

Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H.

Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)

Della Ceca, Roberto. The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Giola, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)

DELLA VALLE, M. Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

DEMARQUE, P. Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)

The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)

DEMARQUE, PIERRE. The Effect of Helium Diffusion on the Ages of Globular Clusters. Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H. Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)

DÉMOULIN, P. Weighted Current Sheets Supported in Normal and Inverse Configurations: A Model for Prominence Observations. P. Démoulin & T. G. Forbes. 387, 394, 41-G5 (1992)

DENIS, M. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.

DE ZEEUW, P. T. Triaxial Galaxy Models with Thin Tube Orbits. C. Hunter & P. T. de Zeeuw. 389, 79, 61-B1 (1992)

DIAMOND, P. H. Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)

DICKEY, JOHN M. Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602, 69-A1 (1992)

DJORGOVSKI, S. Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11 (1992)

DOBRZYCKA, DANUTA. Spectroscopic Observations of the Cataclysmic Variable PG 0917+342: An Ultra-Short-Period Nova-like System. Danuta Dobrzycka & Steve B. Howell. 388, 614, 57-G6 (1992)

DOMÍNGUEZ-TENREIRO, R. On the Dynamical Evolution of Rich Galaxy Clusters. G. Yepes & R. Domínguez-Tenreiro. 387, 27, 37-D1 (1992)

Limits on a Possible Violation of the Strong Equivalence Principle from Primordial Nucleosynthesis. A. Serna & R. Domínguez-Tenreiro. 389, 1, 60-B1 (1992)

DOPITA, MICHAEL A. A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)

Downes, D. Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55,

48-B1 (1992)

DOXSEY, R. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

DRAINE, B. T. On the H₂ Line Emission from NGC 6240 and Other Starburst Galaxies: Erratum. B. T. Draine & D. T. Woods. 387, 732, 47-G1 (1992) (Orig. paper in 381, 288, 192-E5 (1991))

DRÖGE, WOLFGANG. Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Dröge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992)

DUFTON, P. L. The Oscillator Strength of the Si II 3s²3p ²P-3s³p² ²D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)

Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)

DULK, G. A. Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389, 756, 70-F11 (1992)

DUPREE, A. K. Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

DURAND, D. The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)

DWEK, E. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

DWEK, ELI. Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

DYACHKOV, A. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.

See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

DYKEMA, PIETER G. A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)

EICHLER, DAVID. Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5 (1992)

EISENHARDT, PETER. The Lyα/Hα Ratio in High-Redshift Radio Galaxies. Patrick J. McCarthy, Richard Elston, & Peter Eisenhardt. 387, L29, 43-D1 (1992)

ELSTON, RICHARD. The Lyα/Hα Ratio in High-Redshift Radio Galaxies. Patrick J. McCarthy, Richard Elston, & Peter Eisenhardt. 387, L29, 43-D1 (1992)

EPSTEIN, RICHARD I. Vortex Drag and the Spin-up Time Scale for Pulsar Glitches. Richard I. Epstein & Gordon Baym. 387, 276, 40-D1 (1992)

ESCALERA, ERIC. Wavelet Analysis of Subclustering: An Illustration, Abell 754. Eric Escalera & Alain Mazure. 388, 23, 49-C12 (1992)

EVANS, CHARLES R. A Test Suite for Magnetohydrodynamical. Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)

EVANS, NANCY REMAGE. New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

Feibelman, W. A. Improved Calculations for the C III $\lambda\lambda 1907,1909$ and Si III $\lambda\lambda 1883,1892$ Electron Density Sensitive Emission-Line

- FELDMAN, U. Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feldman. 389, 764, 70-67 (1992)
- FELTEN, JAMES E. Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)
- FERLAND, G. J. Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)
- N III Line Emission in Planetary Nebulae: Continuum Fluorescence. G. J. Ferland. 389, L63, 73-D1 (1992)
- FERRIÈRE, KATIA. Effect of an Ensemble of Explosions on the Galactic Dynamo. I. General Formulation. Katia Ferrière. 389, 286, 63-E1 (1992)
- FERRINI, FEDERICO. Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)
- FILIPPENKO, A. V. Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)
- FISCHER, M. L. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales. M. L. Fischer, D. C. Alsop, E. S. Cheng, A. C. Clapp, D. A. Cottingham, J. O. Gundersen, T. C. Koch, E. Kreysa, P. R. Meinhold, A. E. Lange, P. M. Lubin, P. L. Richards, & G. F. Smoot. 388, 242, 53-C11 (1992)
- FISHER, KARL B. The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)
- FISHER, R. R. Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)
- FLYNN, C. Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)
- FLYNN, CHRIS. Evidence for Dwarf Stars at D ~ 100 Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)
- Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)
- FOLTZ, C. B. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)
- FONTAINE, G. On the Influence of the Convective Efficiency on the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1 (1992)
- FORBES, T. G. Weighted Current Sheets Supported in Normal and Inverse Configurations: A Model for Prominence Observations. P. Démoulin & T. G. Forbes. 387, 394, 41-G5 (1992)
- FORD, V. L. No Back-Side Infall into the Great Attractor. D. S.

 Matheman VI. Ford & M. Buchhorn 389, 15, 66-B6 (1992)
- Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992) FORMAN, W. X-Ray Properties of Bright Far-Infrared Galaxies. L. P.
- David, C. Jones, & W. Forman. 388, 82, 50-B4 (1992)

 FORTE, JUAN C. Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)
- FREESE, KATHERINE. COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)
- FRIEL, EILEEN D. Chemical Composition of Open Clusters. III. Iron and Carbon in F Dwarfs in Coma, Praesepe, and M67. Eileen D. Friel & Ann Merchant Boesgaard. 387, 170, 39-A13 (1992)

- FUJIMOTO, MASAYUKI Y. Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Ir., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)
- FULLER, GEORGE M. Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)
- GABUZDA, D. C. A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)
- GALLINO, R. s-Processing in Massive Stars as a Function of Metallicity and Interpretation of Observational Trends. C. M. Raiteri, R. Gallino, & M. Busso. 387, 263, 40-C1 (1992)
- GASKELL, C. MARTIN. Type II-L Supernovae—Standard Bombs. C. Martin Gaskell. 389, L17, 66-C6 (1992)
- GAUME, R. A. High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)
- GEBALLE, T. R. Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)
- GENSHEIMER, P. D. High Spatial Resolution Maps of Circumstellar SiC₂ in IRC +10216. P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)
- GERHARD, ORTWIN E. Dwarf Spheroidal Galaxies and the Mass of the Neutrino. Ortwin E. Gerhard & David N. Spergel. 389, L9, 66-B11 (1992)
- GHOSH, K. K. EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1
- GIES, DOUGLAS R. Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars. Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)
- GIGAS, DETLEF. Downflows and Entropy Gradient Reversal in Deep Convection. Kwing L. Chan & Detlef Gigas. 389, L87, 73-F3 (1992)
- GILFANOV, M. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- GIOIA, ISABELLA M. The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
- GISLER, GALEN R. Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)
- GIURICIN, G. The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti. 389, 68, 61-A1 (1992)
- GLACCUM, W. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)
- GLOECKLER, G. Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)
- GÖRRES, J. A Measurement of the 14 C $(n,\gamma)^{15}$ C Cross Section at a Stellar Temperature of kT=23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)
- GOLDSMITH, PAUL F. High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, & P. M. Harvey. 389, 338, 64-B7 (1992)
- GOLDWIRTH, D. S. The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)
- GOLDWURM, A. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
- SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

A. Goldwurm, J. Ballet, B. Cordier, J. Paul, L. Bouchet, J. P. Roques, D. Barret, P. Mandrou, R. Sunyaev, E. Churazov, M. Gilfanov, Dyachkov, N. Khavenson, V. Kovtunenko, R. Kremnev, & K. Sukhanov. 389, L79, 73-E6 (1992)

GOODE, PHILIP R. Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387, 707, 47-E1

GOODMAN, JEREMY. Convective Instability in Differentially Rotating Disks. Dongsu Ryu & Jeremy Goodman. 388, 438, 55-F12 (1992)

GORDON, M. A. Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)

GOTT, J. RICHARD, III. The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)

GOUGH, DOUGLAS. Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387,

707, 47-E1 (1992)

Gouiffes, C. Modeling the Iron-dominated Spectra of the Type la Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

GOULD, A. Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)

GOULD, ANDREW. Big Bang Archeology: WIMP Capture by the Earth at Finite Optical Depth. Andrew Gould. 387, 21, 37-C7 (1992)

Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)

Evidence for Dwarf Stars at $D \sim 100$ Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)

- GRAHAM, J. R. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)
- GREBENEV, S. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation
- GREENBERG, J. M. Extremely Low Thermal Conductivity of Amorphous Ice: Relevance to Comet Evolution. A. Kouchi, J. M. Greenberg, T. Yamamoto, & T. Mukai. 388, L73, 59-D9 (1992)
- GRINDLAY, J. E. Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4. C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)

GUENTHER, D. B. Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)

GUHATHAKURTA, M. Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)

GUHATHAKURTA, P. Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992) D. Richstone, A. Gould,

GUHATHAKURTA, PURAGRA. Evidence for Dwarf Stars at $D \sim 100$ Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

GULL, THEODORE R. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

- See FISCHER, M. L., et al. A Bolometric GUNDERSEN, J. O. Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular
- GUOJUN, QIAO. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)

- GURNETT, D. A. Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)
- HAISCH, BERNHARD. ROSAT X-Ray All-Sky Survey Observations of Hybrid Stars. Bernhard Haisch, J. H. M. M. Schmitt, & C. Rosso. 388, L61, 59-C7 (1992)

HANAMI, HITOSHI. Gamma-Ray Bursts from Planet-Magnetosphere Systems around Neutron Stars. Hitoshi Hanami. 389, L71, 73-D11

HARDEE, PHILIP E. Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387. 460, 44-D8 (1992)

HARIDASS, C. The Comet-Tail (A-X) System of CO+: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_i$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)

HARRA, L. K. Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)

HARTMANN, D. Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)

HARTQUIST, T. W. Large Electric Fields in Acoustic Waves and the Stimulation of Lightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)

HARVEY, P. M. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris.

387, 189, 39-C8 (1992)

High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, & P. M. Harvey. 389, 338, 64-B7 (1992)

HAWLEY, JOHN F. A Test Suite for Magnetohydrodynamical Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)

HAYASHIDA, K. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.

HAYASHIDA, KIYOSHI. The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

HEAP, S. R. Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)

HECKMAN, T. M. Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies: Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

HENDRY, PAUL D. The GDDSYN Light Curve Synthesis Method. Paul D. Hendry & Stefan W. Mochnacki. 388, 603, 57-F7 (1992)

HENRIKSEN, R. N. Turbulence in Cooling Flows. Catherine F. Westbury & R. N. Henriksen. 388, 64, 49-G12 (1992)

HERANT, MARC. Postexplosion Hydrodynamics of SN 1987A. Marc Herant & Willy Benz. 387, 294, 40-E9 (1992)

HESSER, JAMES H. CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)

HIBBERT, A. The Oscillator Strength of the Si II 3s23p 2P-3s3p2 2D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)

HIGDON, J. C. HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)

HILLS, J. G. Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)

HILLS, R. E. Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

HINTZEN, PAUL. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

- HOFFMAN, G. LYLE. A Huge H I Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)
- HOFFMAN, YEHUDA. The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse. 388, L13, 52-B6 (1992)
- HOGG, DAVID E. Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregnan, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)
- HOLLWEG, JOSEPH V. Alfvénically Driven Slow Shocks in the Solar Chromosphere and Corona. Joseph V. Hollweg. 389, 731, 70-D10 (1992)
- HORCH, É. The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)
- HORNE, K. Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)
- HOWELL, R. R. 10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8 (1992)
- HOWELL, STEVE B. TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)
- Spectroscopic Observations of the Cataclysmic Variable PG 0917+342: An Ultra-Short-Period Nova-like System. Danuta Dobrzycka & Steve B. Howell. 388, 614, 57-G6 (1992)
- HRIVNAK, B. J. Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)
- HUCHRA, J. P. Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388, 253, 53-D10 (1992)
- HUCHRA, JOHN P. The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)
- HUMMER, D. G. The Sobolev Approximation for Line Formation with Partial Frequency Redistribution. D. G. Hummer & G. B. Rybicki. 387, 248, 40-A10 (1992)
- HUMPHREYS, ROBERTA M. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Teny J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- HUNTER, C. Triaxial Galaxy Models with Thin Tube Orbits. C. Hunter & P. T. de Zeeuw. 389, 79, 61-B1 (1992)
- HURLEY, K. Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)
- HUT, PIET. The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W. Romani. 389, 527, 68-A8 (1992)
- IBEN, ICKO, JR. Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)
 - Rare Thermonuclear Explosions in Short-Period Cataclysmic Variables, with Possible Application to the Nova-like Red Variable in the Galaxy M31. *Icko Iben, Jr., & Alexander V. Tutukov.* 389, 369, 64-E1 (1992)
- IKEUCHI, SATORU. Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)
- INOUE, H. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- INUTSUKA, SHU-ICHIRO. Self-similar Solutions and the Stability of Collapsing Isothermal Filaments. Shu-ichiro Inutsuka & Shoken M. Miyama. 388, 392, 55-C1 (1992)
- IPAVICH, F. M. Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

- IPSER, JAMES R. On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. James R. Ipser & Lee Lindblom. 389, 392, 64-G1 (1992)
- IRWIN, JUDITH A. Warm Molecular Gas in the Nucleus of IC 342: The CO (J = 3→2) Distribution. Judith A. Irwin & L. W. Avery. 388, 328, 54-D7 (1992)
- ISHIDA, M. H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)
- JACOBY, GEORGE H. Planetary Nebulae as Standard Candles. VIII. Evidence for a Change in the Luminosity Function Cutoff at Low Metallicity. Robin Ciardullo & George H. Jacoby. 388, 268, 53-F1 (1992)
- A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)
- JEFFERIES, J. T. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)
- JENKINS, ÉDWARD B. Dense Clumps of Ionized Gas near π Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins. 388, 495, 56-D9 (1992)
- JERNIGAN, GARRETT. Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 387, L17, 43-B13 (1992)
- Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)
- JERNIGAN, J. GARRETT. Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)
- JING, YI-PENG. Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)
- JOG, CHANDA J. A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992)
- JOHNSON, HOLLIS R. Ionization and Excitation in Cool Giant Stars.

 Hydrogen and Helium. Donald G. Luttermoser & Hollis R. Johnson. 388, 579, 57-D7 (1992)
- JOHNSTON, K. J. High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)
- JOHNSTON, SIMON. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)
- JONCAS, G. The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)
- JONES, C. X-Ray Properties of Bright Far-Infrared Galaxies. L. P. David, C. Jones, & W. Forman. 388, 82, 50-B4 (1992)
- JONES, TERRY J. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- JONES, TERRY JAY. Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602, 69-A1 (1992)
- JOURDAIN, E. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
- JOY, M. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)
- JUNKKARINEN, VESA T. Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

- JUSTTANONT, K. Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justianont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)
- KAPPELER, F. A Measurement of the 14C(n, v)15C Cross Section at a Stellar Temperature of kT = 23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)
- Measurement of the ⁷⁶Se(n, γ) Capture Cross Section and Phenomenological s-Process Studies: The Weak Component. Hermann Beer, G. Walter, & F. Käppeler. 389, 784, 71-B1 (1992)
- KAFATOS, M. Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)

KAISER, NICK. Weak Gravitational Lensing of Distant Galaxies. Nick Kaiser. 388, 272, 53-F7 (1992)

- KALLRATH, J. Modeling of the Eclipsing Binaries in the Globular Cluster NGC 5466. J. Kallrath, E. F. Milone, & C. R. Stagg. 389, 590, 68-G1 (1992)
- KANG, HYESUNG. Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)
- KARACHENTSEV, I. D. The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)
- KASHLINSKY, A. Constraints on the Power Spectrum of the Primordial Density Field from Large-Scale Data: Microwave Background and Predictions of Inflation. A. Kashlinsky. 387, L1, 43-A8 (1992)
- KASPI, V. M. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37,
- KASSIOLA, AGGELIKI. Multiple Quasars with Large Magnitude Differences: Extreme Magnification by Gravitational Lenses? Aggeliki Kassiola & Israel Kovner. 388, 33, 49-D10 (1992)
- KASTNER, JOEL H. The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)
- KATZ, J. I. Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)
- KATZ, NEAL. Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)
- KEENAN, F. P. The Oscillator Strength of the Si 11 3s23p 2P-3s3p2 2D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)
 - Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)

Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389,

440, 65-D1 (1992)

Improved Calculations for the C III λλ1907,1909 and Si III λλ1883,1892 Electron Density Sensitive Emission-Line Ratios. and a Comparison with IUE Observations. F. P. Keenan, W. A. Feibelman, & K. A. Berrington. 389, 443, 65-D5 (1992)

KELLY, DOUGLAS M. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)

KENNICUTT, ROBERT C., JR. The Integrated Spectra of Nearby Galaxies: General Properties and Emission-Line Spectra. Robert C. Kennicutt, Jr. 388, 310, 54-C1 (1992)

KENT, S. M. Galactic Structure from the Spacelab Infrared Telescope.
III. A Dynamical Model for the Milky Way Bulge. S. M. Kent. 387, 181, 39-B12 (1992)

KETO, ERIC. Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 387, L17, 43-B13 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9

- Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)
- KHAVENSON, N. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- T. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- KILKENNY, DAVID. First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)

KIM, Y.-C. Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)

KINGSTON, A. E. Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)

KIPLINGER, A. L. Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389,

756, 70-F11 (1992)

KITAMOTO, SHUNJI. The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

- KLEBE, DIMITRI. Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602, 69-A1 (1992)
- KLEIN, RICHARD I. A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Ka Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)
- KOCH, T. C. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- KOEHLER, P. E. A Measurement of the 14 C $(n,\gamma)^{15}$ C Cross Section at a Stellar Temperature of kT = 23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)
- KOHL, JOHN L. On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- KOO, BON-CHUL. Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1 (1992)
- Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992)
- KOPP, G. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)
- KORMENDY, JOHN. The Nonthermal Nucleus of M87. John Kormendy. 388, L9, 52-B1 (1992)
- KOSOVICHEV, ALEXANDER. Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387, 707, 47-E1 (1992)
- KOUCHI, A. Extremely Low Thermal Conductivity of Amorphous Ice: Relevance to Comet Evolution. A. Kouchi, J. M. Greenberg, T. Yamamoto, & T. Mukai. 388, L73, 59-D9 (1992)
- KOVNER, ISRAEL. Multiple Quasars with Large Magnitude Differences: Extreme Magnification by Gravitational Lenses? Aggeliki Kassiola & Israel Kovner. 388, 33, 49-D10 (1992)
- TUNENKO, V. See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: KOVTUNENKO, V. Discovery of Positron Annihilation Emission Line.
- AMA, K. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- KOZLOWSKI, BEN ZION. Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Amon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)
- KREMNEV, R. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation

See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.

KREYSA, E. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave

Background Radiation on Medium Angular Scales.

KRONBERG, PHILIPP P. Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg. Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)

KWOK, S. Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, &

B. J. Hrivnak. 387, L89, 48-E1 (1992)

LACIS, ANDREW A. The Abundance and Distribution of Water Vapor in the Jovian Troposphere as Inferred from Voyager IRIS Observations. Barbara E. Carlson, Andrew A. Lacis, & William B. Rossow. 388, 648, 58-C7 (1992)

LAHAV, O. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny.

387, 56, 37-F6 (1992)

LAMB, FREDERICK K. Energy Dependence of Normal Branch Quasiperiodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)

LAMBERT, DAVID L. Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars. Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)

LAMPHIER, C. A Huge HI Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)

- LANGE, A. E. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- LANZA, ANTONIO. Self-gravitating Thin Disks around Rapidly Rotating Black Holes. Antonio Lanza. 389, 141, 61-G1 (1992)

LANZETTA, K. M. Magnetic Fields in Damped Lyα Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)

- LATTER, WILLIAM B. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)
- LAWRENCE, GEOFFREY. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- LECAR, M. The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)

LEHAR, JOSEPH. Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)

LESTER, D. F. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)

High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, & P. M. Harvey. 389, 338, 64-B7 (1992)

LESTER, JOHN B. Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

LEVIN, JANNA J. COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)

LEVINE, A. X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappapon, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)

LEVINSON, AMIR. Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5 (1992)

LEWIS, W. X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)

Li, Hongwei. The [O I] λλ6300,6364 Doublet of SN 1987A. Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)

LIBBRECHT, K. G. On the Ultimate Accuracy of Solar Oscillation Frequency Measurements. K. G. Libbrecht. 387, 712, 47-E7 (1992)

LIKKEL, LAUREN. High Spatial Resolution Maps of Circumstellar SiC2 in IRC +10216. P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)

- LIM, JEREMY. First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)
- LIMONGI, MARCO. The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco Castellani, Marco Limongi, & Amedeo Tornambè. 389, 227,

62-G1 (1992)

Lin, D. N. C. Young Globular Clusters in the Milky Way Galaxy.

D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

LINDBLOM, LEE. On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. James R. Ipser & Lee Lindblom. 389, 392, 64-G1 (1992)

LINDSEY, C. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)

LING, J. C. HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314,

40-G5 (1992)

LIPARI, SEBASTIAN. Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522, 45-B9 (1992)

LIS, DARIUSZ C. High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, &

P. M. Harvey. 389, 338, 64-B7 (1992)

LIVIO, MARIO. Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)

Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10 (1992)

LOCKWOOD, J. A. The Solar Flare Event on 1990 May 24: Evidence for Two Separate Particle Accelerations. H. Debrunner, J. A. Lockwood, & J. M. Ryan. 387, L51, 43-F7 (1992)

LOEWENSTEIN, R. F. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

LONG, KEVIN. Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362,

54-G8 (1992)

LOWENTHAL, JAMES D. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

LUBIN, P. M. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave

Background Radiation on Medium Angular Scales.

LUBOW, STEPHEN H. Dynamics of Ultraharmonic Resonances in Spiral Galaxies. Pawel Artymowicz & Stephen H. Lubow. 389, 129, 61-F1 (1992)

LUCY, L. B. Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

Luo, Ding. The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac

Low. 388, 127, 50-E10 (1992)

LUTTERMOSER, DONALD G. Ionization and Excitation in Cool Giant Stars. I. Hydrogen and Helium. Donald G. Luttermoser & Hollis R. Johnson. 388, 579, 57-D7 (1992)

LYNE, A. G. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne,

M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)

MACCACARO, TOMMASO. The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M.

Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
MACCHETTO, F. Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522,

45-B9 (1992)

MACDONALD, JAMES. CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)

MACDONALD, JIM. Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521,

56-F11 (1992)

- MACGREGOR, K. B. Angular Momentum Transport in Magnetized Stellar Radiative Zones. I. Numerical Solutions to the Core Spin-up Model Problem. P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)
- MAC LOW, MORDECAI-MARK. The Semicircular Shell of CTB 109.

 Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, &
 Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

MADAU, PIERO. The Contribution of Quasars to the Ultraviolet Extragalactic Background. Piero Madau. 389, L1, 66-B1 (1992) MAGAIN, P. A Spectroscopic Study of UM 673 A and B: On the Size of

Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

- MAGALHABS, A. M. The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhäes, & M. J. Wolff. 387, 347, 41-C6
- MAGAZZÚ, ANTONIO. Spectroscopy of a Brown Dwarf Candidate in the a Persei Open Cluster. Rafael Rebolo, Eduardo L. Martin, & Antonio Magazzù. 389, L83, 73-E11 (1992)
- MAGGIO, A. X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants. G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)
- MAHONEY, W. A. HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)
- MAIER, E. Preliminary Results of a Balloon Flight of the Solar Disk Sextant. E. Maier, L. Twigg, & S. Sofia. 389, 447, 65-D11 (1992)
- MAKINO, F. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. MAKISHIMA, K. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- MALONEY, PHILIP R. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)
- MANANDHAR, R. P. Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4. C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)
- MANCHESTER, R. N. PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)
- MANDROU, P. See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- MANDZHAVIDZE, NATALIE. High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. Natalie Mandzhavidze & Reuven Ramaty. 389, 739, 70-E6 (1992)
- MANGUM, JEFFREY G. Synthesis Imaging of the DR 21 (OH) Cluster. II. Thermal Ammonia and Water Maser Emission. Jeffrey G. Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)
- MAO, SHUDE. On the Cosmological Origin of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 388, L45, 59-A9 (1992) Gravitational Microlensing by a Single Star plus External Shear. Shude Mao. 389, 63, 60-G9 (1992)

- On the Galactic Disk and Halo Models of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992)
- Gravitational Lensing, Time Delay, and Gamma-Ray Bursts. Shude Mao. 389, L41, 73-B1 (1992)
- MAOZ, D. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

MARDIROSSIAN, F. The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti.

389, 68, 61-A1 (1992)

MARGON, BRUCE. TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

MARTÍN, EDUARDO L. Spectroscopy of a Brown Dwarf Candidate in the a Persei Open Cluster. Rafael Rebolo, Eduardo L. Martín, &

Antonio Magazzù. 389, L83, 73-E11 (1992)

- MASON, K. O. Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)
- MASSON, COLIN R. Properties of Swept-up Molecular Outflows. Colin R. Masson & Lawrence M. Chernin. 387, L47, 43-F1 (1992)
- MATEO, MARIO. TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)

- MATESE, JOHN J. Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)
- MATHEWSON, D. S. No Back-Side Infall into the Great Attractor. D. S. Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992)
- MATTEUCCI, FRANCESCA. Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)
- MAYLE, R. Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)
- MAZURE, ALAIN. Wavelet Analysis of Subclustering: An Illustration, Abell 754. Eric Escalera & Alain Mazure. 388, 23, 49-C12 (1992)
- MAZZITELLI, I. Further Improvements of a New Model for Turbulent Convection in Stars. V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1 (1992)
- McCarthy, Patrick J. The Lya/Ha Ratio in High-Redshift Radio Galaxies. Patrick J. McCarthy, Richard Elston, & Peter Eisenhardt. 387, 1.29, 43-D1 (1992)
 McCray, Richard. The [O i] λλ6300,6364 Doublet of SN 1987A.
- Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)
- The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)
- McKee, Christopher F. Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1 (1992)
 - Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992)
- McKenzie, D. L. Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feldman. 389, 764, 70-G7 (1992)
- McMillan, Steve. The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W.
- Romani. 389, 527, 68-A8 (1992) MCNAMARA, BRIAN R. X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)
- MEIER, S. R. Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)

MEINHOLD, P. R. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.

MEIXNER, MARGARET. Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jemigan, &

Margaret Meixner. 387, L17, 43-B13 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)

MEIXNER, MARGARET M. Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

MELIA, FULVIO. An Accreting Black Hole Model for Sagittarius A*. Fulvio Melia. 387, L25, 43-C10 (1992)

MELOTT, ADRIAN L. The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)

MELROSE, D. B. Energy Propagation into a Flare Kernel during a Solar Flare. D. B. Melrose. 387, 403, 42-A1 (1992)

MÉNDEZ, MARIANO. Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)

MEREGHETTI, SANDRO. On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ringshaped Supernova Remnant. Giovanni F. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)

MEYER, BRADLEY S. Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)

MEZZETTI, M. The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti. 389, 68, 61-A1 (1992)

MICELA, G. X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants. G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)

Time Variability Studies with Photon-counting Imaging Detectors.

I. A Maximum Likelihood Technique. S. Sciortino & G. Micela.
388, 595, 57-E11 (1992)

MICHALITSIANOS, A. G. Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)

MILLER, GUY S. Energy Dependence of Normal Branch Quasi-periodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)

MILLER, J. C. Rotational Properties of Strange Stars. M. Colpi & J. C. Miller. 388, 513, 56-F1 (1992)

MILONE, E. F. Modeling of the Eclipsing Binaries in the Globular Cluster NGC 5466. J. Kallrath, E. F. Milone, & C. R. Stagg. 389, 590, 68-G1 (1992)

MIYAMA, SHOKEN M. Self-similar Solutions and the Stability of Collapsing Isothermal Filaments. Shu-ichiro Inutsuka & Shoken M. Miyama. 388, 392, 55-C1 (1992)

MOCHNACKI, STEPAN W. The GDDSYN Light Curve Synthesis Method. Paul D. Hendry & Stefan W. Mochnacki. 388, 603, 57-F7 (1992)

MORFILL, G. E. Large Electric Fields in Acoustic Waves and the Stimulation of Lightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)

MORRIS, M. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)

MOSELEY, S. H. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

MOULD, JEREMY R. Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388, 253, 53-D10 (1992)

MOLLER-MELLIN, REINHOLD. Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Droge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992)

MUKAI, T. Extremely Low Thermal Conductivity of Amorphous Ice: Relevance to Comet Evolution. A. Kouchi, J. M. Greenberg, T. Yamamoto, & T. Mukai. 388, L73, 59-D9 (1992)

MUNDY, LEE G. Synthesis Imaging of the DR 21 (OH) Cluster.

II. Thermal Ammonia and Water Maser Emission. Jeffrey G.

Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)

NAGASE, F. X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)

NAGASE, FUMIAKI. The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

NAHAR, S. N. Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

NARAYAN, RAMESH. The Stability of Accretion Tori. IV. Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1 (1992)

NELSON, GRAHAM J. First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, 1.27, 52-C7 (1992)

NICHOLSON, RICHARD A. The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)

NIEL, M. Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)

See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.

NOCI, G. Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)

NORDSIECK, K. H. The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)

NORMAN, MICHAEL L. Instabilities in Astrophysical Jets. I. Einear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)

Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)

A Test Suite for Magnetohydrodynamical Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)

The Magnetic Collimation of Bipolar Outflows. I. Adiabatic Simulations. *James M. Stone & Michael L. Norman.* 389, 297, 63-F1 (1992)

NORRIS, JOHN E. Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)

NUSSINOV, SHMUEL. Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Amon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)

O'CONNELL, ROBERT W. X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

O'DELL, C. R. Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O I] Line. C. R. O'Dell & Zheng Wen. 387, 229, 39-F10 (1992)

Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992) OERTEL, G. K. What Caused an Unusually Broad He i 10830 Å Emission Line in a Solar Limb Flare? J. Q. You & G. K. Oenel.

389, L33, 66-E1 (1992)
OHASHI, T. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.

- H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)
- OJHA, P. C. The Oscillator Strength of the Si 11 3s23p 2P-3s3p2 2D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)

OKE, J. B. CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)

- OLIVERSEN, RONALD J. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)
- OMOTE, MINORU. Gravitational Lens Effects on the Density Parameter. Hiroshi Yoshida & Minoru Omote. 388, L1, 52-A7 (1992)
- OPAL, CHET B. Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)

OREN, A. L. Magnetic Fields in Damped Lya Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)

- ORRALL, F. Q. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1
- Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)

OSTERBROCK, DONALD E. Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D.

Tran, & Sylvain Veilleux. 389. 196, 62-D7 (1992)

- Faint Emission Lines in the Spectrum of the Orion Nebula and the Abundances of Some of the Rarer Elements. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux 389, 305, 63-F11 (1992)
- OSTRIKER, J. P. Galactic Disks, Infall, and the Global Value of Ω . G. Toth & J. P. Ostriker. 389, 5, 60-B6 (1992)
- OSTRIKER, JEREMIAH P. Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362, 54-G8 (1992)
- PACZYŃSKI, BOHDAN. On the Cosmological Origin of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 388, L45, 59-A9 (1992) On the Galactic Disk and Halo Models of Gamma-Ray Bursts.

Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992)

- PADMAN, R. Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)
- PADOVANI, P. Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)
- PANCHAPAKESAN, N. Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, & N. Panchapakesan. 388, 131, 50-F1 (1992)
- PANEK, MIROSLAW. Cosmic Background Radiation Anisotropies from Cosmic Structures: Models Based on the Tolman Solution. Mirosław Panek. 388, 225, 53-B4 (1992)
- PARDI, CHIARA. Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138,
- PARESCE, FRANCESCO. The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

- PARK, CHANGBOM. The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)
- L, J. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- Penco, Umberto. Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)
- PENNINGTON, ROBERT L. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- PERES, G. Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)
- PERLEY, RICK A. Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)
- PERRY, JUDITH J. Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)
- PETERSON, B. M. Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)
- PHILLIPS, J. A. Rocks around the Clock: Limits on Pulsar Planetary Systems. S. E. Thorsett & J. A. Phillips. 387, L69, 48-C6 (1992)
- PIERCE, MICHAEL J. Luminosity-Line Width Relations and the Extragalactic Distance Scale. I. Absolute Calibration. Michael J. Pierce & R. Brent Tully. 387, 47, 37-E8 (1992)
- PILIPP, W. Large Electric Fields in Acoustic Waves and the Stimulation of Lightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)
- PINSONNEAULT, M. The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)
- PINSONNEAULT, M. H. Standard Solar Model. D. B. Guenther. P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)
- The Effect of Helium Diffusion on the Ages of Globular Clusters. Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H. Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)
- PIRAN, T. The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)
- PIRAN, TSVI. The Implications of the Compton (GRO) Observations for Cosmological Gamma-Ray Bursts. Tsvi Piran. 389, L45, 73-B6 (1992)
- PISANI, A. The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti. 389, 68, 61-A1 (1992)
- PLIONIS, MANOLIS. Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)
- PRASAD, C. V. V. The Comet-Tail (A-X) System of CO⁺: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_1$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)
- PRATAP, PREETHI. Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992)
- PRIALNIK, DINA. Crystallization, Sublimation, and Gas Release in the Interior of a Porous Comet Nucleus. Dina Prialnik. 388, 196, 51-D8 (1992)

- PUCHNAREWICZ, E. M. Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymons, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)
- QU, QUINYUE. The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)
- RADFORD, S. J. E. Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)
- RAITERI, C. M. s-Processing in Massive Stars as a Function of Metallicity and Interpretation of Observational Trends. C. M. Raiteri, R. Gallino, & M. Busso. 387, 263, 40-C1 (1992)
- RAMATY, REUVEN. Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)
- High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. *Natalie Mandzhavidze & Reuven Ramaty*. 389, 739, 70-E6 (1992)
- RAPPAPORT, S. X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)
- RAYMOND, JOHN C. On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- REAMES, D. V. Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)
- REBÒLO, ŘAFAEL. Spectroscopy of a Brown Dwarf Candidate in the α Persei Open Cluster. Rafael Rebolo, Eduardo L. Martín, & Antonio Magazzà. 389, L83, 73-E11 (1992)
- REDDY, S. PADDI. The Comet-Tail (A-X) System of CO⁺: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_i$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)
- REICHERT, G. A. Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)
- REIPURTH, Bo. G203.2-12.3: A New Optical Supernova Remnant in Orion. P. Frank Winkler & Bo Reipurth. 389, L25, 66-D1 (1992)
- REISENFELD, DANIEL B. On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- REMILLARD, R. A. H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)
- RIBEIRO, MARCELO B. On Modeling a Relativistic Hierarchical (Fractal) Cosmology by Tolman's Spacetime. I. Theory. Marcelo B. Ribeiro. 388, 1, 49-B1 (1992)
- RICHARDS, MERCEDES T. Consequences of the Star-Stream Interaction in Algol. Mercedes T. Richards. 387, 329, 41-A12 (1992)
- RICHARDS, P. L. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- RICHARDSON, I. G. Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)
- RICHER, HARVEY B. Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)
- RICHSTONE, D. Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)
 RICHSTONE, DOUGLAS. Evidence for Dwarf Stars at D ~ 100
- RICHSTONE, DOUGLAS. Evidence for Dwarf Stars at D ~ 100 Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)
- RICKARD, G. J. Taylor Relaxation of a Gold-Hoyle Flux Tube. G. J. Rickard. 389, 413, 65-A10 (1992)

- RIEKE, G. H. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelby, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)
- RIEKE, M. J. Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)
- RIX, HANS-WALTER. Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)
- ROBERTS, D. H. A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)
- ROBERTS, MORTON S. Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)
- ROBINSON, P. A. Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)
- ROBDER, ROBERT C. A Deficiency of Large-Scale Pairs among Nearby Quasars. Robert C. Roeder. 387, L13, 43-B8 (1992)
- ROELLIG, T. L. Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)
- ROGER, R. S. The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)
- ROMANI, ROGER W. The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W. Romani. 389, 527, 68-A8 (1992)
- Roos, T. A Huge H I Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)
- ROQUES, J. P. See GOLDWURM, A., et al. SIGMA/GRANAT
 Soft Gamma-Ray Observations of the X-Ray Nova in Musca:
 Discovery of Positron Annihilation Emission Line.
- ROSEN, NATHAN. Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)
- Rosso, C. ROSAT X-Ray All-Sky Survey Observations of Hybrid Stars. Bernhard Haisch, J. H. M. M. Schmitt, & C. Rosso. 388, L61, 59-C7 (1992)
- Rossow, William B. The Abundance and Distribution of Water Vapor in the Jovian Troposphere as Inferred from Voyager IRIS Observations. Barbara E. Carlson, Andrew A. Lacis, & William B. Rossow. 388, 648, 58-C7 (1992)
- ROTTMAN, G. J. Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)
- RUIZ-LAPUENTE, P. Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy, 387, L33, 43-D8 (1992)
- RUSSELL, A. P. G. Atomic and Molecular Outflow in DR 21. A. P. G.
 Russell, J. Balb, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)
- RYAN, J. M. The Solar Flare Event on 1990 May 24: Evidence for Two Separate Particle Accelerations. H. Debrunner, J. A. Lockwood, & J. M. Ryan. 387, L51, 43-F7 (1992)
- RYAN, SEAN G. Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)
- RYBICKI, G. B. The Sobolev Approximation for Line Formation with Partial Frequency Redistribution. D. G. Hummer & G. B. Rybicki. 387, 248, 40-A10 (1992)
- RYU, DONGSU. Convective Instability in Differentially Rotating Disks.

 Dongsu Ryu & Jeremy Goodman. 388, 438, 55-F12 (1992)
- SALPETER, E. E. A Huge H 1 Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)
- SANTIAGO, BASILIO X. Large-Scale Morphological Segregation in the Center for Astrophysics Redshift Survey. Basilio X. Santiago & Michael A. Strauss. 387, 9, 37-B7 (1992)

SARAJEDINI, ATA. The Effect of Helium Diffusion on the Ages of Globular Clusters. Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H. Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)

SARAZIN, CRAIG L. X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R.

McNamara. 389, L59, 73-C8 (1992)

SASSELOV, DIMITAR D. Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

SATO, KATSUHIKO. Constraints on the Universe with a Decaying Cosmological Constant from a Number Count of Faint Galaxies. Yuzuru Yoshii & Katsuhiko Sato. 387, L7, 43-B1 (1992)

Constraints on Cosmological Models with the Decaying Cosmological Constant from Cosmic Background Radiation Anisotropies. Naoshi Sugiyama & Katsuhiko Sato. 387, 439, 44-B10 (1992)

SAXTON, R. D. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.

SCAPPATICG, GERARDO A. Radiative Instabilities and 1000 Second Fluctuations in Astrophysical Masers. Gerardo A. Scappaticci & William D. Watson. 387, L73, 48-C10 (1992)

SCARAMELLA, ROBERTO. Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani,

& Giovanni Zamorani. 388, 9, 49-B10 (1992)

SCHERRER, ROBERT J. Topology of Large-Scale Structure in Seeded Hot Dark Matter Models. Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443, 44-C1 (1992)

SCHMITT, J. H. M. M. ROSAT X-Ray All-Sky Survey Observations of Hybrid Stars. Bernhard Haisch, J. H. M. M. Schmitt, & C. Rosso.

388, L61, 59-C7 (1992)

SCHNEIDER, D. P. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

SCHOMMER, ROBERT A. Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388,

253, 53-D10 (1992)

SCHULTE-LADBECK, R. E. The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)

SCIORTINO, S. Time Variability Studies with Photon-counting Imaging Detectors. I. A Maximum Likelihood Technique. S. Sciortino &

G. Micela. 388, 595, 57-E11 (1992)

SEAQUIST, E. R. Observations of Symbiotic Stars at Millimeter and Submillimeter Wavelengths. E. R. Seaquist & A. R. Taylor. 387,

SELLGREN, K. The 3 Micron Spectrum of the Classical Be Star β Monocerotis A. K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)

SERNA, A. Limits on a Possible Violation of the Strong Equivalence Principle from Primordial Nucleosynthesis. A. Serna & R. Domínguez-Tenreiro. 389, 1, 60-B1 (1992)

SHAHAM, JACOB. Orbital Angular Momentum Loss in PSR 1957+20. Menashe Banit & Jacob Shaham. 388, L19, 52-B11 (1992)

SHAPIRO, PAUL R. Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

SHAPIRO, STUART L. Equilibrium Stellar Systems with Spindle Singularities. Stuart L. Shapiro & Saul A. Teukolsky. 388, 287,

53-G10 (1992)

SHAVER, P. A. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

SHOUB, EDWARD C. Close Encounters in Coulomb and Gravitational Scattering. I. Relaxation of Isotropic Test-Particle Distributions by Like-Particle Collisions. Edward C. Shoub. 389, 558, 68-D8

SHULMAN, BONNIE JEAN. Magnetohydrodynamic Waves in Sharply and Smoothly Bounded Cylinders. Bonnie Jean Shulman & Ellen G. Zweibel. 389, 428, 65-C1 (1992)

- SIGALOTTI, LEONARDO DI G. Rotating Stars: The Angular Momentum Constraints. Fernando de Felice & Leonardo Di G. Sigalotti. 389, 386, 64-F7 (1992)
- SILBER, A. H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)

SILK, JOSEPH. The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse.

388, L13, 52-B6 (1992)

SILVERBERG, R. F. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

SIMILON, PHILIPPE L. Alfvén Wave Transmission through the Solar Atmosphere. Philippe L. Similon & Shahrokh Zargham. 388, 644,

58-C1 (1992)

SIMON, M. 10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8

SIMON, NORMAN R. Evolution versus Pulsation along the Horizontal Branch of M15. Norman R. Simon. 387, 162, 39-A3 (1992)

- SMETTE, A. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39,
- SMITH, GRAEME H. CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)
- SMITH, I. A. Proton Acceleration in Neutron Star Magnetospheres.
- I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992) SMITH, R. G. The 3 Micron Spectrum of the Classical Be Star β Monocerotis A. K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)
- SMITH, R. K. Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)
- SMOOT, G. F. See FISCHER, M. L., et al. A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales.
- SNYDER, L. E. High Spatial Resolution Maps of Circumstellar SiC2 in IRC +10216. P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)
- SNYDER, LEWIS E. Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992)
- SOFIA, S. Preliminary Results of a Balloon Flight of the Solar Disk Sextant. E. Maier, L. Twigg, & S. Sofia. 389, 447, 65-D11 (1992)
- SOKER, NOAM. Jet Formation in the Transition from the Asymptotic Giant Branch to Planetary Nebulae. Noam Soker. 389, 628, 69-C1 (1992)
- SOLOMON, P. M. A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992)
- Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1
- SOUNDARARAJAPERUMAL, S. EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1 (1992)
- SPADARO, D. Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)
- SPERGEL, DAVID N. Dwarf Spheroidal Galaxies and the Mass of the Neutrino. Ortwin E. Gerhard & David N. Spergel. 389, L9, 66-B11
 - COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)
- STAFFORD, R. P. The Oscillator Strength of the Si II 3s²3p ²P-3s3p² ²D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton. F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)

- STAGG, C. R. Modeling of the Eclipsing Binaries in the Globular Cluster NGC 5466. J. Kallrath, E. F. Milone, & C. R. Stagg. 389, 590, 68-G1 (1992)
- STEWART, G. C. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- STOCKE, JOHN T. The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
- STONE, JAMES M. A Test Suite for Magnetohydrodynamical Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)
 - The Magnetic Collimation of Bipolar Outflows. I. Adiabatic Simulations. James M. Stone & Michael L. Norman. 389, 297, 63-F1 (1992)
- STRAUSS, MICHAEL A. Large-Scale Morphological Segregation in the Center for Astrophysics Redshift Survey. Basilio X. Santiago & Michael A. Strauss. 387, 9, 37-B7 (1992)
 - The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)
- STROHMAYER, T. E. Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)
- Determining the Coherence of Micropulses. T. E. Strohmayer, J. M. Cordes, & H. M. Van Horn. 389, 685, 69-G12 (1992)
- SUGINOHARA, TATSUSHI. Large-Scale Structure in Isocurvature Baryon Models. Tatsushi Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)
- SUGIYAMA, NAOSHI. Constraints on Cosmological Models with the Decaying Cosmological Constant from Cosmic Background Radiation Anisotropies. Naoshi Sugiyama & Katsuhiko Sato. 387, 439, 44-B10 (1992)
- SUKHANOV, K. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line.
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- SULKANEN, MARTIN E. Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)
 - Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)
- SUNYAEV, R. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line. R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, S. Grebenev, R. Kremnev, K. Sukhanov, A. Goldwurm, J. Ballet, B. Cordier, J. Paul, M. Denis, G. Vedrenne, M. Niel, & E. Jourdain. 389, L75, 73-E1 (1992)
 - See GOLDWURM, A., et al. SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line.
- SURDEJ, J. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)
- SUTO, YASUSHI. Large-Scale Structure in Isocurvature Baryon Models. Tatsushi Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)
- SZKODY, PAULA. TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)
- TAMURA, KEISUKE. The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)
- TAMURA, MOTOHIDE. The Molecular Hydrogen Emission around L1551 IRS 5: Shock- Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)
- TASSOUL, JEAN-LOUIS. On the Interior Structure of Contact Binaries and the Light-Curve Paradox. Jean-Louis Tassoul. 389, 375, 64-E9 (1992)

- TAYLOR, A. R. Observations of Symbiotic Stars at Millimeter and Submillimeter Wavelengths. E. R. Seaquist & A. R. Taylor. 387, 624, 46-D5 (1992)
- TAYLOR, KEITH. The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)
- TAYLOR, M. The Wind Geometry of the Wolf-Rayet Star HD 191765.
 R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman,
 A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)
- TEUKOLSKY, SAUL A. Equilibrium Stellar Systems with Spindle Singularities. Stuart L. Shapiro & Saul A. Teukolsky. 388, 287, 53-G10 (1992)
- THOMPSON, W. T. A Rotating Tomographic Imager for Solar Extreme-Ultraviolet/Soft X-Ray Emission. Joseph M. Davila & W. T. Thompson. 389, L91, 73-F8 (1992)
- THORSETT, S. E. Rocks around the Clock: Limits on Pulsar Planetary Systems. S. E. Thorsett & J. A. Phillips. 387, L69, 48-C6 (1992)
- Tielens, A. G. G. M. Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)
 - Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justianont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)
- TILLETT, JASON C. CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)
- TOMKIN, JOCELYN. Secondaries of Eclipsing Binaries. VII. The Spectroscopic Triple and Visual Double V505 Sagittarii. *Jocelyn Tomkin*. 387, 631, 46-E1 (1992)
- TORNAMBÈ, AMEDEO. The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco Castellani, Marco Limongi, & Amedeo Tornambè. 389, 227, 62-61 (1992)
- TÓTH, G. Galactic Disks, Infall, and the Global Value of Ω. G. Tóth & J. P. Ostriker. 389, 5, 60-B6 (1992)
- TRAN, HIEN D. Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 196, 62-D7 (1992)
- Faint Emission Lines in the Spectrum of the Orion Nebula and the Abundances of Some of the Rarer Elements. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 305, 63-F11 (1992)
- TRURAN, JAMES W. Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10 (1992)
- TSUNEMI, HIROSHI. The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)
- TULLY, R. BRENT. Luminosity-Line Width Relations and the Extragalactic Distance Scale. I. Absolute Calibration. Michael J. Pierce & R. Brent Tully. 387, 47, 37-E8 (1992)
- Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)
- TURATTO, M. Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L.33, 43-D8 (1992)
- TURNER, B. E. Detection of SiN in IRC +10216. B. E. Turner. 388, L35, 52-D1 (1992)
- TURNER, EDWIN L. Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)
- TURNER, M. J. L. See WILLIAMS, O. R., et al. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga.
- TUTUKOV, ALEXANDER V. Rare Thermonuclear Explosions in Short-Period Cataclysmic Variables, with Possible Application to the Nova-like Red Variable in the Galaxy M31. Icko Iben, Jr., & Alexander V. Tutukov. 389, 369, 64-E1 (1992)
- TWIGG, L. Preliminary Results of a Balloon Flight of the Solar Disk Sextant. E. Maier, L. Twigg, & S. Sofia. 389, 447, 65-D11 (1992)

URRY, C. M. Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)

Usov, V. V. Stellar Wind Collision and X-Ray Generation in Massive Binaries. V. V. Usov. 389, 635, 69-C10 (1992)

- VAIANA, G. S. X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants. G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5
- VALDARNINI, RICCARDO. Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)

VALK, JACOBUS H. Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621,

58-A1 (1992)

VAN BREUGEL, W. Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies: Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

VANDERVOORT, PETER O. A Rotating Stäckel Potential. G. Contopoulos & Peter O. Vandervoort. 389, 118, 61-E1 (1992)

VAN HORN, H. M. Effects of Fe/C Phase Separation on the Ages of White Dwarfs. Z. W. Xu & H. M. Van Horn. 387, 662, 47-A1 (1992) Determining the Coherence of Micropulses. T. E. Strohmayer, J. M.

Cordes, & H. M. Van Horn. 389, 685, 69-G12 (1992)

VAN WYK. FRANÇOIS. First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)

VASSILIADIS, E. A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, &

E. Vassiliadis. 389, 27, 60-D1 (1992)

VEDRENNE, G. See SUNYAEV, R., et al. X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation

VEGA, E. IRENE. Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)

VEILLEUX, SYLVAIN. Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 196, 62-D7 (1992)

Faint Emission Lines in the Spectrum of the Orion Nebula and the Abundances of Some of the Rarer Elements. Donald E. Osterbrock, Hien D. Tran. & Sylvain Veilleux. 389, 305, 63-F11 (1992)

VETTOLANI, GIAMPAOLO. Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)

VILLUMSEN, JENS V. Topology of Large-Scale Structure in Seeded Hot Dark Matter Models. Matthew M. Beaky, Robert J. Scherrer, &

Jens V. Villumsen. 387, 443, 44-C1 (1992)

VON STEIGER, R. Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

WALTER, G. Measurement of the 76 Se(n, γ) Capture Cross Section and Phenomenological s-Process Studies: The Weak Component. Hermann Beer, G. Walter, & F. Käppeler. 389, 784, 71-B1 (1992)

WANG, ZHENRU. The Semicircular Shell of CTB 109. Zhenru Wang. Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

WARDLE, J. F. C. A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)

WARDLE, MARK. Gravitational Lensing by a Massive Black Hole at the Galactic Center. Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)

Radiative Instabilities and 1000 Second Fluctuations in Astrophysical Masers. Gerardo A. Scappaticci & William D. Watson. 387, L73, 48-C10 (1992) WEINTRAUB, DAVID A. The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)

WELSH, W. F. Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

WEN, ZHENG. Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O 1] Line. C. R. O'Dell & Zheng Wen. 387,

229, 39-F10 (1992)

WENTZEL, DONAT G. Structure of Sunspot Penumbrae: Fallen Magnetic Flux Tubes. Donat G. Wentzel. 388, 211, 51-E11 (1992)

WENZEL, K.-P. Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)

WERNER, M. W. The Luminosity of the Galactic Center. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)

Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)

WESEMABL, F. On the Influence of the Convective Efficiency on

the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1 (1992)

WESTBURY, CATHERINE F. Turbulence in Cooling Flows. Catherine F. Westbury & R. N. Henriksen. 388, 64, 49-G12 (1992)

WEYMANN, R. J. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

WHEATON, W. A. HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C.

Higdon. 387, 314, 40-G5 (1992)

WHITE, RAYMOND E., III. Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)

WHITE, RICHARD L. π^0 -Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6

(1992)

WHITMAN, PATRICK G. Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)

WHITMIRE, DANIEL P. Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, &

Patrick G. Whitman. 388, 190, 51-D1 (1992)

WHITTLE, MARK. Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. Mark Whittle. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

WIDING, K. G. Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)

WIESCHER, M. A Measurement of the ${}^{14}C(n,\gamma)^{15}C$ Cross Section at a Stellar Temperature of kT = 23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)

WIITA, PAUL J. Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)

WILLIAMS, O. R. The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. O. R. Williams, M. J. L. Turner, G. C. Stewart, R. D. Saxton, T. Ohashi, K. Makishima, T. Kii, H. Inoue, F. Makino, K. Hayashida, & K. Koyama. 389, 157, 62-A5 (1992)

WILLIAMS, R. E. A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A.

Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

WILLIAMS, ROBERT E. TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

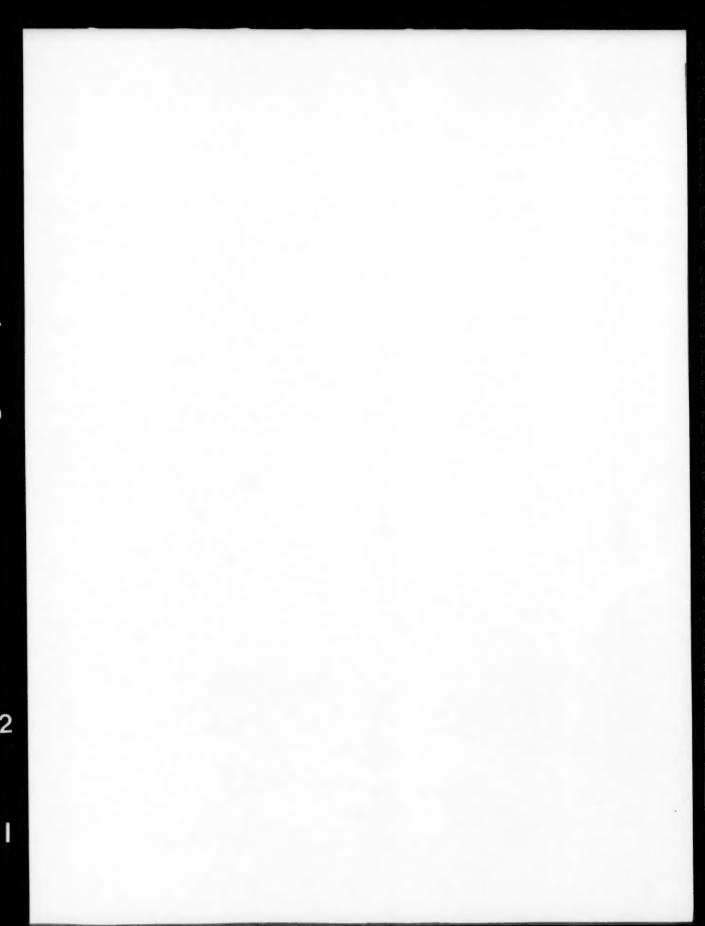
- WILLIAMS, T. B. Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388, 253, 53-D10 (1992)
- WILSON, JAMES R. Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)
- WILSON, T. L. High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)
- WINGLEE, R. M. Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389, 756, 70-F11 (1992)
- WINKLER, P. FRANK. G203.2-12.3: A New Optical Supernova Remnant in Orion. P. Frank Winkler & Bo Reipurth. 389, L25, 66-D1 (1992)
- WOLFE, A. M. Magnetic Fields in Damped Lyα Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)
- WOLFF, M. J. The Wind Geometry of the Wolf-Rayet Star HD 191765.
 R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman,
 A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)
- WOLTER, ANNA. The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
- WOMACK, M. A Survey of N₂H⁺ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)
- WOMBLE, DONNA S. Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)
- WOOD, P. On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Berielli, & A. Bressan. 387, 320, 41-A1 (1992)
- WOODGATE, BRUCE E. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)
- WOODS, D. T. On the H₂ Line Emission from NGC 6240 and Other Starburst Galaxies: Erratum. B. T. Draine & D. T. Woods. 387, 732, 47-G1 (1992) (Orig. paper in 381, 288, 192-E5 (1991))
- WOOTTEN, ALWYN. Synthesis Imaging of the DR 21 (OH) Cluster.

 II. Thermal Ammonia and Water Maser Emission. Jeffrey G.

 Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)
- WU, C.-C. Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)
- WU, X. The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)
- WYCKOFF, S. A Survey of N₂H⁺ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)
- WYSE, ROSEMARY F. G. The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse. 388, L13, 52-B6 (1992)

- Xu, Z. W. Effects of Fe/C Phase Separation on the Ages of White Dwarfs. Z. W. Xu & H. M. Van Horn. 387, 662, 47-A1 (1992)
- YAHIL, AMOS. The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)
- YAMAMOTO, T. Extremely Low Thermal Conductivity of Amorphous Ice: Relevance to Comet Evolution. A. Kouchi, J. M. Greenberg, T. Yamamoto, & T. Mukai. 388, L73, 59-D9 (1992)
- YAMASHITA, TAKUYA. The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)
- YANNY, B. The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)
- YEPES, G. On the Dynamical Evolution of Rich Galaxy Clusters. G. Yepes & R. Domínguez-Tenreiro. 387, 27, 37-D1 (1992)
- YOSHIDA, HIROSHI. Gravitational Lens Effects on the Density Parameter. Hiroshi Yoshida & Minoru Omote. 388, L1, 52-A7 (1992)
- YOSHII, YUZURU. Constraints on the Universe with a Decaying Cosmological Constant from a Number Count of Faint Galaxies. Yuzuru Yoshii & Katsuhiko Sato. 387, L7, 43-B1 (1992)
- You, J. Q. What Caused an Unusually Broad He i 10830 Å Emission Line in a Solar Limb Flare? J. Q. You & G. K. Oertel. 389, L33, 66-E1 (1992)
- YOUNG, ALBERT R. On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- YUSEF-ZADEH, FARHAD. Gravitational Lensing by a Massive Black Hole at the Galactic Center. Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)
- ZAMORANI, GIOVANNI. Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)
- ZARGHAM, SHAHROKH. Alfvén Wave Transmission through the Solar Atmosphere. Philippe L. Similon & Shahrokh Zargham. 388, 644, 58-C1 (1992)
- ZHAO, JUN-HUI. Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)
- Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Marin E. Sulkanen. 387, 83, 38-B1 (1992)

 ZIEGLER, MICHAEL M. Fabry-Perot Images of NGC 1275 and
- ZIEGLER, MICHAEL M. Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)
- ZIURYS, L. M. A Survey of N₂H⁺ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)
- ZUKOWSKI, EDWIN L. H. Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)
- ZUMACH, WILLIAM. Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- ZWEIBEL, ELLEN G. Magnetohydrodynamic Waves in Sharply and Smoothly Bounded Cylinders. Bonnie Jean Shulman & Ellen G. Zweibel. 389, 428, 65-C1 (1992)



SUBJECT INDEX

PARTS 1 & 2, VOLUMES 387 -389

1992 MARCH 1 TO APRIL 20

ACCELERATION OF PARTICLES

- The Solar Flare Event on 1990 May 24: Evidence for Two Separate Particle Accelerations. H. Debrunner, J. A. Lockwood, & J. M. Ryan. 387, L51, 43-F7 (1992)
- π⁰-Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6 (1992)
- Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)

ACCRETION, ACCRETION DISKS

- Consequences of the Star-Stream Interaction in Algol. Mercedes T. Richards. 387, 329, 41-A12 (1992)
- Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)
- 10 AU Scale Halo Structure around DG Thuri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8 (1992)
- Howell, M. Simon, & J. A. Benson. 381, LAS, 43-E8 (1992)
 Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)
- Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)
- Convective Instability in Differentially Rotating Disks. Dongsu Ryu & Jeremy Goodman. 388, 438, 55-F12 (1992)
- The Stability of Accretion Tori. IV. Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1 (1992)
- Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)
- Energy Dependence of Normal Branch Quasi-periodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)
- CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)
- Self-gravitating Thin Disks around Rapidly Rotating Black Holes. Antonio Lanza. 389, 141, 61-G1 (1992)
- On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. *James R. Ipser & Lee Lindblom.* 389, 392, 64-G1 (1992)
- H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)
- Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

ARTIFICIAL SATELLITES, SPACE PROBES

- Preliminary Results of a Balloon Flight of the Solar Disk Sextant. E. Maier, L. Twigg, & S. Sofia. 389, 447, 65-D11 (1992)
- Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

ATOMIC DATA

- The Oscillator Strength of the Si 11 3s²3p ²P-3s3p² ²D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)
- Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)
- Improved Calculations for the C III $\lambda\lambda$ 1907,1909 and Si III $\lambda\lambda$ 1883,1892 Electron Density Sensitive Emission-Line Ratios, and a Comparison with *IUE* Observations. F. P. Keenan, W. A. Feibelman, & K. A. Berrington. 389, 443, 65-D5 (1992)

ATOMIC PROCESSES

- Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)
- The Oscillator Strength of the Si II 3s²3p ²P-3s³p² ²D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)
- A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)
- Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)
- Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)
- What Caused an Unusually Broad He i 10830 Å Emission Line in a Solar Limb Flare? J. Q. You & G. K. Oertel. 389, L33, 66-E1 (1992)
- On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- N III Line Emission in Planetary Nebulae: Continuum Fluorescence. G. J. Ferland. 389, L63, 73-D1 (1992)

BLACK HOLE PHYSICS

- Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)
- An Accreting Black Hole Model for Sagittarius A*. Fulvio Melia. 387, L25, 43-C10 (1992)
- Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4.
 C. E. Covault, J. E. Grindlay, & R. P. Manandnar. 388, L65, 59-C12 (1992)
- Self-gravitating Thin Disks around Rapidly Rotating Black Holes. Antonio Lanza. 389, 141, 61-G1 (1992)
- X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line. R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, S. Grebenev, R. Kremnev, K. Sukhanov, A. Goldwurm, J. Ballet, B. Cordier, J. Paul, M. Denis, G. Vedrenne, M. Niel, & E. Jourdain. 389, L75, 73-E1 (1992)

CELESTIAL MECHANICS, STELLAR DYNAMICS

- Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388, 253, 53-D10 (1992)
- Equilibrium Stellar Systems with Spindle Singularities. Stuart L Shapiro & Saul A. Teukolsky. 388, 287, 53-G10 (1992)
- Triaxial Galaxy Models with Thin Tube Orbits. C. Hunter & P. T. de Zeeuw. 389, 79, 61-B1 (1992)
- A Rotating Stäckel Potential. G. Contopoulos & Peter O. Vandervoort. 389, 118, 61-E1 (1992)
- The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W. Romani. 389, 527, 68-A8 (1992)
- Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)
- Close Encounters in Coulomb and Gravitational Scattering. I. Relaxation of Isotropic Test-Particle Distributions by Like-Particle Collisions. Edward C. Shoub. 389, 558, 68-D8 (1992)

COMETS: GENERAL

Crystallization, Sublimation, and Gas Release in the Interior of a Porous Comet Nucleus. Dina Prialnik. 388, 196, 51-D8 (1992) Extremely Low Thermal Conductivity of Amorphous Ice: Relevance to Comet Evolution. A. Kouchi, J. M. Greenberg, T. Yamamoto, & T. Mukai. 388, L73, 59-D9 (1992)

COMETS: INDIVIDUAL

Name: Austin 1989c

Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)

CONVECTION

On the Influence of the Convective Efficiency on the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1 (1992) Convective Instability in Differentially Rotating Disks. Dongsu Ryu &

Jeremy Goodman. 388, 438, 55-F12 (1992)

Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992) Large-Scale Flows and Solar Luminosity Variations. S. Arendt. 389,

421, 65-B6 (1992)

Further Improvements of a New Model for Turbulent Convection in Stars. V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1 (1992)

Downflows and Entropy Gradient Reversal in Deep Convection. Kwing L. Chan & Detlef Gigas. 389, L87, 73-F3 (1992)

COSMOLOGY: COSMIC MICROWAVE BACKGROUND

Constraints on the Power Spectrum of the Primordial Density Field from Large-Scale Data: Microwave Background and Predictions of Inflation. A. Kashlinsky. 387, L1, 43-A8 (1992)

Constraints on Cosmological Models with the Decaying Cosmological Constant from Cosmic Background Radiation Anisotropies. Naoshi Sugiyama & Katsuhiko Sato. 387, 439, 44-B10 (1992)

Cosmic Background Radiation Anisotropies from Cosmic Structures: Models Based on the Tolman Solution. Miroslaw Panek. 388, 225, 53-B4 (1992)

The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)

A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales. M. L. Fischer, D. C. Alsop, E. S. Cheng, A. C. Clapp, D. A. Cottingham, J. O. Gundersen, T. C. Koch, E. Kreysa, P. R. Meinhold, A. E. Lange, P. M. Lubin, P. L. Richards, & G. F. Smoot. 388, 242, 53-C11 (1992)

COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)

COSMOLOGY: DARK MATTER

Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)

Dwarf Spheroidal Galaxies and the Mass of the Neutrino. Ortwin E. Gerhard & David N. Spergel. 389, L9, 66-B11 (1992)

COSMOLOGY: DISTANCE SCALE

A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)

COSMOLOGY: GRAVITATIONAL LENSING

The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6

Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)

Gravitational Lensing by a Massive Black Hole at the Galactic Center. Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)

Multiple Quasars with Large Magnitude Differences: Extreme Magnification by Gravitational Lenses? Aggeliki Kassiola & Israel Kovner. 388, 33, 49-D10 (1992)

A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)

Gravitational Lens Effects on the Density Parameter. Hiroshi Yoshida & Minoru Omote. 388, L1, 52-A7 (1992)

Weak Gravitational Lensing of Distant Galaxies. Nick Kaiser. 388, 272, 53-F7 (1992)

A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

Gravitational Microlensing by a Single Star plus External Shear. Shude Mao. 389, 63, 60-G9 (1992)

Gravitational Lensing, Time Delay, and Gamma-Ray Bursts. Shude Mao. 389, L41, 73-B1 (1992)

COSMOLOGY: LARGE-SCALE STRUCTURE OF UNIVERSE

The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)

Large-Scale Morphological Segregation in the Center for Astrophysics Redshift Survey. Basilio X. Santiago & Michael A. Strauss. 387, 9,

37-B7 (1992)

Large-Scale Structure in Isocurvature Baryon Models. Tatsushi Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)

Topology of Large-Scale Structure in Seeded Hot Dark Matter Models. Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443, 44-C1 (1992)

On Modeling a Relativistic Hierarchical (Fractal) Cosmology by Tolman's Spacetime. I. Theory. Marcelo B. Ribeiro. 388, 1, 49-B1

Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully. Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)

The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)

Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)

COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)

COSMOLOGY: OBSERVATIONS

Constraints on the Universe with a Decaying Cosmological Constant from a Number Count of Faint Galaxies. Yuzuru Yoshii & Katsuhiko Sato. 387, L7, 43-B1 (1992)

Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)

Magnetic Fields in Damped Lyα Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)

Galactic Disks, Infall, and the Global Value of Ω. G. Tóth & J. P. Ostriker. 389, 5, 60-B6 (1992)

The Contribution of Quasars to the Ultraviolet Extragalactic Background. Piero Madau. 389, L1, 66-B1 (1992)

Type II-L Supernovae-Standard Bombs. C. Martin Gaskell. 389, L17,

66-C6 (1992)

The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)

Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)

The Implications of the Compton (GRO) Observations for Cosmological Gamma-Ray Bursts. Tsvi Piran. 389, L45, 73-B6 (1992)

COSMOLOGY: THEORY

The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)

Big Bang Archeology: WIMP Capture by the Earth at Finite Optical Depth. Andrew Gould. 387, 21, 37-C7 (1992)

Constraints on the Universe with a Decaying Cosmological Constant from a Number Count of Faint Galaxies. Yuzuru Yoshii & Katsuhiko Sato. 387, L7, 43-B1 (1992)

Large-Scale Structure in Isocurvature Baryon Models. Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)

Constraints on Cosmological Models with the Decaying Cosmological Constant from Cosmic Background Radiation Anisotropies. Naoshi Sugiyama & Katsuhiko Sato. 387, 439, 44-B10 (1992)

xxi

- On Modeling a Relativistic Hierarchical (Fractal) Cosmology by Tolman's Spacetime. I. Theory. *Marcelo B. Ribeiro*. 388, 1, 49-B1 (1992)
- Gravitational Lens Effects on the Density Parameter. Hiroshi Yoshida & Minoru Omote. 388, L1, 52-A7 (1992)
- The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse. 388, L13, 52-B6 (1992)
- Cosmic Background Radiation Anisotropies from Cosmic Structures: Models Based on the Tolman Solution. Miroslaw Panek. 388, 225, 53-B4 (1992)
- Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)
- On the Cosmological Origin of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 388, L45, 59-A9 (1992)
- Limits on a Possible Violation of the Strong Equivalence Principle from Primordial Nucleosynthesis. A. Serna & R. Dominguez-Tenreiro. 389, 1, 60-B1 (1992)
- Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)
- COBE Limits on Explosive Structure Formation Scenarios. Janna J. Levin, Katherine Freese, & David N. Spergel. 389, 464, 67-C5 (1992)
- Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)

DARK MATTER

- The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)
- Constraints on Cosmological Models with the Decaying Cosmological Constant from Cosmic Background Radiation Anisotropies.

 Naoshi Sugiyama & Katsuhiko Sato. 387, 439, 44-B10 (1992)
- Topology of Large-Scale Structure in Seeded Hot Dark Matter Models.

 Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443,
 44-C1 (1992)
- Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)
- Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)
- Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)
- The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510, 67-G1 (1992)

DENSE MATTER

Rotational Properties of Strange Stars. M. Colpi & J. C. Miller. 388, 513, 56-F1 (1992)

DIFFUSION

- The Effect of Helium Diffusion on the Ages of Globular Clusters.

 Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H.

 Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)
- Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)

EARTH

Big Bang Archeology: WIMP Capture by the Earth at Finite Optical Depth. Andrew Gould. 387, 21, 37-C7 (1992)

ECLIPSES

Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)

ELEMENTARY PARTICLES

- Big Bang Archeology: WIMP Capture by the Earth at Finite Optical Depth. Andrew Gould. 387, 21, 37-C7 (1992)
- Topology of Large-Scale Structure in Seeded Hot Dark Matter Models. Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443, 44-C1 (1992)
- Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, & N. Panchapakesan. 388, 131, 50-F1 (1992)

- Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)
- Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)
- Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)

EQUATION OF STATE

Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)

ERRATA, ADDENDA

On the H₂ Line Emission from NGC 6240 and Other Starburst Galaxies: Erratum. B. T. Draine & D. T. Woods. 387, 732, 47-G1 (1992) (Orig. paper in 381, 288, 192-E5 (1991))

GALAXIES: ABUNDANCES

Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)

GALAXIES: ACTIVE

- The Lyα/Hα Ratio in High-Redshift Radio Galaxies. Patrick J. McCarthy, Richard Elston, & Peter Eisenhardt. 387, L29, 43-D1 (1992).
- Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522, 45-B9 (1992)
- A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)
- The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. O. R. Williams, M. J. L. Turner, G. C. Stewart, R. D. Saxton, T. Ohashi, K. Makishima, T. Kii, H. Inoue, F. Makino, K. Hayashida, & K. Koyama. 389, 157, 62-A5 (1992)

GALAXIES: BL LACERTAE OBJECTS: GENERAL

A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)

GALAXIES: CLUSTERING

- The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)
- On the Dynamical Evolution of Rich Galaxy Clusters. G. Yepes & R. Domínguez-Tenreiro. 387, 27, 37-D1 (1992)
- Constraints on the Power Spectrum of the Primordial Density Field from Large-Scale Data: Microwave Background and Predictions of Inflation. A. Kashlinsky. 387, L1, 43-A8 (1992)
- A Deficiency of Large-Scale Pairs among Nearby Quasars. Robert C. Roeder. 387, L13, 43-B8 (1992)
- Large-Scale Structure in Isocurvature Baryon Models. Tatsushi Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)
- Topology of Large-Scale Structure in Seeded Hot Dark Matter Models.

 Matthew M. Beaky, Robert J. Scherrer, & Jens V. Villumsen. 387, 443,

 44-C1 (1992)
- On Modeling a Relativistic Hierarchical (Fractal) Cosmology by Tolman's Spacetime. I. Theory. *Marcelo B. Ribeiro*. 388, 1, 49-B1
- Possible Geometric Patterns in 0.1c Scale Structure. R. Brent Tully, Roberto Scaramella, Giampaolo Vettolani, & Giovanni Zamorani. 388, 9, 49-B10 (1992)
- Wavelet Analysis of Subclustering: An Illustration, Abell 754. Eric Escalera & Alain Mazure. 388, 23, 49-C12 (1992)
- A Huge H I Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)
- Cosmic Background Radiation Anisotropies from Cosmic Structures: Models Based on the Tolman Solution. Mirosław Panek. 388, 225, 53-B4 (1992)
- The Largest Possible Voids. G. R. Blumenthal, L. Nicolaci da Costa, D. S. Goldwirth, M. Lecar, & T. Piran. 388, 234, 53-C1 (1992)
- Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

- The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti. 389, 68, 61-A1 (1992)
- Large-Scale Structure in a Low-Bias Universe. H. M. P. Couchman & R. G. Carlberg. 389, 453, 67-B6 (1992)
- Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)
- The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510, 67-G1 (1992)
- X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

GALAXIES: COOLING FLOWS

xxii

- Turbulence in Cooling Flows. Catherine F. Westbury & R. N. Henriksen. 388, 64, 49-G12 (1992)
- Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)
- X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

GALAXIES: DISTANCES

Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

GALAXIES: DISTANCES AND REDSHIFTS

- Luminosity-Line Width Relations and the Extragalactic Distance Scale. I. Absolute Calibration. Michael J. Pierce & R. Brent Tully. 387, 47, 37-E8 (1992)
- Peculiar Velocities of Field Spiral Galaxies near and beyond the Great Attractor. Gregory D. Bothun, Robert A. Schommer, T. B. Williams, Jeremy R. Mould, & J. P. Huchra. 388, 253, 53-D10 (1992)
- Planetary Nebulae as Standard Candles. VIII. Evidence for a Change in the Luminosity Function Cutoff at Low Metallicity. Robin Ciardullo & George H. Jacoby. 388, 268, 53-F1 (1992)
- A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)
- No Back-Side Infall into the Great Attractor. D. S. Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992)
- Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11 (1992)

GALAXIES: ELLIPTICAL AND LENTICULAR, CD

- The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)
- The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco Castellani, Marco Limongi, & Amedeo Tomambè. 389, 227, 62-G1 (1992)

GALAXIES: EVOLUTION

- On the Dynamical Evolution of Rich Galaxy Clusters. G. Yepes &
- R. Dominguez-Tenreiro. 387, 27, 37-D1 (1992)

 Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)
- The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)
- The Properties of X-Ray Selected Active Galactic Nuclei. Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
- Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11 (1992)

GALAXIES: FORMATION

On the Dynamical Evolution of Rich Galaxy Clusters. G. Yepes & R. Domínguez-Tenreiro. 387, 27, 37-D1 (1992)

- Constraints on the Power Spectrum of the Primordial Density Field from Large-Scale Data: Microwave Background and Predictions
- of Inflation. A. Kashlinsky. 387, L1, 43-A8 (1992)
 The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse. 388, L13, 52-B6 (1992)
- Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)
- The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510, 67-G1 (1992)
- Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11
- Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)

GALAXIES: FUNDAMENTAL PARAMETERS

- Large-Scale Morphological Segregation in the Center for Astrophysics Redshift Survey. Bastlio X. Santiago & Michael A. Strauss. 387, 9, 37-B7 (1992)
- Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)
- Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)
- The Formation of Giant Low Surface Brightness Galaxies. Yehuda Hoffman, Joseph Silk, & Rosemary F. G. Wyse. 388, L13, 52-B6 (1992)

GALAXIES: GENERAL

- Type II-L Supernovae-Standard Bombs. C. Martin Gaskell. 389, L17, 66-C6 (1992)
- Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11

GALAXIES: INDIVIDUAL

Messier Number: M31

Rare Thermonuclear Explosions in Short-Period Cataclysmic Variables, with Possible Application to the Nova-like Red Variable in the Galaxy M31. Icko Iben, Jr., & Alexander V. Tutukov. 389, 369, 64-E1 (1992)

Messier Number: M87

- Turbulence in Cooling Flows. Catherine F. Westbury & R. N. Henriksen. 388, 64, 49-G12 (1992)
- The Nonthermal Nucleus of M87. John Kormendy. 388, L9, 52-B1 (1992)

NGC Number: NGC 520

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 828

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 1275

Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

NGC Number: NGC 1530

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 1614

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)

NGC Number: NGC 3079

Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

NGC Number: NGC 3147

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 3690

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 3998

Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)

NGC Number: NGC 5128

The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)

NGC Number: NGC 5548

Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

NGC Number: NGC 6240

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

NGC Number: NGC 7469

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)

NGC Number: NGC 7771

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Name: Arp 193

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Name: Arp 220

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Name: Arp 299

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Name: Markarian 231

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Name: Sextans

Evidence for Dwarf Stars at $D \sim 100$ Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

Alphanumeric: 3C 382

EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1 (1992)

Alphanumeric: IC 342

Warm Molecular Gas in the Nucleus of IC 342: The CO (J = 3-2) Distribution. Judith A. Irwin & L. W. Avery. 388, 328, 54-D7 (1992)

Alphanumeric: IRAS 04493-6441

Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522, 45-B9 (1992)

Alphanumeric: IRAS 22419-6049

Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lípari & F. Macchetto. 387, 522, 45-B9 (1992)

GALAXIES: INTERACTIONS

A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992)

Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

GALAXIES: INTERGALACTIC MEDIUM

A Huge H I Cloud near a Galaxy Pair. G. Lyle Hoffman, E. E. Salpeter, C. Lamphier, & T. Roos. 388, L5, 52-A11 (1992)

Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

The Contribution of Quasars to the Ultraviolet Extragalactic Background. Piero Madau. 389, L1, 66-B1 (1992)

Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)

GALAXIES: INTERSTELLAR MATTER

A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992)

The Lyα/Hα Ratio in High-Redshift Radio Galaxies. Pairick J. McCarthy, Richard Elston, & Peter Eisenhardt. 387, L29, 43-D1 (1992)

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

GALAXIES: ISM

The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)

The Integrated Spectra of Nearby Galaxies: General Properties and Emission-Line Spectra. Robert C. Kennicutt, Jr. 388, 310, 54-C1 (1992)

Warm Molecular Gas in the Nucleus of IC 342: The CO (J = 3-2)
Distribution. Judith A. Irwin & L. W. Avery. 388, 328, 54-D7 (1992)

Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies: Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

GALAXIES: JETS

Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. Mark Whittle. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)

Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)

Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)

A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)

GALAXIES: KINEMATICS AND DYNAMICS

Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. Mark Whittle. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthom, & Keith Taylor. 387, 503, 45-A1 (1992)

Equilibrium Stellar Systems with Spindle Singularities. Stuart L. Shapiro & Saul A. Teukolsky. 388, 287, 53-G10 (1992)

Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

Warm Molecular Gas in the Nucleus of IC 342: The CO (J = 3-2) Distribution. Judith A. Irwin & L. W. Avery. 388, 328, 54-D7 (1992) Galactic Disks, Infall, and the Global Value of Ω. G. Toth & J. P.

Ostriker. 389, 5, 60-B6 (1992)

Triaxial Galaxy Models with Thin Tube Orbits. C. Hunter & P. T. de Zeeum: 389, 79, 61-B1 (1992)

A Rotating Stäckel Potential. G. Contopoulos & Peter O. Vandervoort. 389, 118, 61-E1 (1992)

Dynamics of Ultraharmonic Resonances in Spiral Galaxies. Pawel Artymowicz & Stephen H. Lubow. 389, 129, 61-F1 (1992)

No Back-Side Infall into the Great Attractor. D. S. Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992)

Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)

GALAXIES: LOCAL GROUP

Planetary Nebulae as Standard Candles. VIII. Evidence for a Change in the Luminosity Function Cutoff at Low Metallicity. Robin Ciardullo & George H. Jacoby. 388, 268, 53-F1 (1992)

Dwarf Spheroidal Galaxies and the Mass of the Neutrino. Ortwin E. Gerhard & David N. Spergel. 389, L9, 66-B11 (1992)

GALAXIES: LUMINOSITY FUNCTION, MASS FUNCTION

Large-Scale Morphological Segregation in the Center for Astrophysics Redshift Survey. Basilio X. Santiago & Michael A. Strauss. 387, 9, 37-B7 (1992)

Planetary Nebulae as Standard Candles. VIII. Evidence for a Change in the Luminosity Function Cutoff at Low Metallicity. Robin Ciardullo & George H. Jacoby. 388, 268, 53-F1 (1992)

The Mass Distribution Function of Groups of Galaxies. A. Pisani, G. Giuricin, F. Mardirossian, & M. Mezzetti. 389, 68, 61-A1 (1992)

GALAXIES: MAGELLANIC CLOUDS

Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)

A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)

GALAXIES: NUCLEI

Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. Mark Whittle. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

Mid-Infrared Imaging of Markarian 231 and Arp 220. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 387, L17, 43-B13 (1992)

Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)

Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)

Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)

A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992) The Nonthermal Nucleus of M87. John Kormendy. 388, L9, 52-B1 (1992)

The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. O. R. Williams, M. J. L. Turner, G. C. Stewart, R. D. Saxton, T. Ohashi, K. Makishima, T. Kii, H. Inoue, F. Makino, K. Hayashida, & K. Koyama.

Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 196, 62-D7 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)

The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)

GALAXIES: PHOTOMETRY

Constraints on the Universe with a Decaying Cosmological Constant from a Number Count of Faint Galaxies. Yuzuru Yoshii & Katsuhiko Sato. 387, L7, 43-B1 (1992)

The Integrated Spectra of Nearby Galaxies: General Properties and Emission-Line Spectra. Robert C. Kennicutt, Jr. 388, 310, 54-C1 (1992)

Evidence for Dwarf Stars at D ~ 100 Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

No Back-Side Infall into the Great Attractor. D. S. Mathewson, V. L. Ford, & M. Buchhorn. 389, L5, 66-B6 (1992)

GALAXIES: QUASARS: ABSORPTION LINES

Magnetic Fields in Damped Lyα Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)

Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)

GALAXIES: QUASARS: EMISSION LINES

Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

GALAXIES: QUASARS: GENERAL

The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)

A Deficiency of Large-Scale Pairs among Nearby Quasars. Robert C. Roeder. 387, L13, 43-B8 (1992)

Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)

Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522, 45-B9 (1992)

Multiple Quasars with Large Magnitude Differences: Extreme Magnification by Gravitational Lenses? Aggeliki Kassiola & Israel Kovner. 388, 33, 49-D10 (1992)

The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. O. R. Williams, M. J. L. Turner, G. C. Stewart, R. D. Saxton, T. Ohashi, K. Makishima, T. Kii, H. Inoue, F. Makino, K. Hayashida, & K. Koyama. 389, 157, 62-A5 (1992)

The Contribution of Quasars to the Ultraviolet Extragalactic Background. Piero Madau. 389, L1, 66-B1 (1992)

The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca, Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)

GALAXIES: OUASARS: INDIVIDUAL

Alphanumeric: 0957+561

Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)

Alphanumeric: 0958+559

Detection of Ca II Absorption in the QSO 0958+559 Due to a Heiles Shell in NGC 3079. Donna S. Womble, Vesa T. Junkkarinen, & E. Margaret Burbidge. 388, 55, 49-G1 (1992)

Alphanumeric: 1229-021

Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)

Alphanumeric: UM 673

A Spectroscopic Study of UM 673 A and B: On the Size of Lyman-Alpha Clouds. A. Smette, J. Surdej, P. A. Shaver, C. B. Foltz, F. H. Chaffee, R. J. Weymann, R. E. Williams, & P. Magain. 389, 39, 60-E1 (1992)

GALAXIES: SEYFERT

Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. *Mark Whittle*. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

Fabry-Perot Images of NGC 1275 and Its Puzzling High-Velocity System. Adeline Caulet, Bruce E. Woodgate, Larry W. Brown, Theodore R. Gull, Paul Hintzen, James D. Lowenthal, Ronald J. Oliversen, & Michael M. Ziegler. 388, 301, 54-A12 (1992)

EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1 (1992)

Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 196, 62-D7 (1992)

GALAXIES: STELLAR CONTENT

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)

Coronal Lines and Starburst Features in Two New IRAS Active Galactic Nuclei: IRAS 04493-6441 and IRAS 22419-6049. Sebastian Lipari & F. Macchetto. 387, 522, 45-B9 (1992)

Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)

X-Ray Properties of Bright Far-Infrared Galaxies. L. P. David, C. Jones, & W. Forman. 388, 82, 50-B4 (1992)

The Integrated Spectra of Nearby Galaxies: General Properties and Emission-Line Spectra. Robert C. Kennicutt, Jr. 388, 310, 54-C1 (1992)

Evidence for Dwarf Stars at D ~ 100 Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)

The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)

Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)

Systematic Differences between the Field and Cluster Elliptical Galaxies. R. R. de Carvalho & S. Djorgovski. 389, L49, 73-B11 (1992)

GALAXIES: STRUCTURE

The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)

Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)

GALAXY: ABUNDANCES

Possible Sources of the Population I Lithium Abundance and Light-Element Evolution. Lawrence E. Brown. 389, 251, 63-B1 (1992)

GALAXY: CENTER

The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)

An Accreting Black Hole Model for Sagittarius A*. Fulvio Melia. 387, L25, 43-C10 (1992)

Gravitational Lensing by a Massive Black Hole at the Galactic Center.

Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)

GALAXY: EVOLUTION

Possible Sources of the Population I Lithium Abundance and Light-Element Evolution. Lawrence E. Brown. 389, 251, 63-B1 (1992)

GALAXY: FORMATION

Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

GALAXY: GLOBULAR CLUSTERS: GENERAL

CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)

Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

Equilibrium Stellar Systems with Spindle Singularities. Stuart L. Shapiro & Saul A. Teukolsky. 388, 287, 53-G10 (1992)

Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362, 54-G8 (1992)

The Effect of Helium Diffusion on the Ages of Globular Clusters.

Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H.

Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)

Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W. Romani. 389, 527, 68-A8 (1992)

Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)

GALAXY: GLOBULAR CLUSTERS: INDIVIDUAL

Messier Number: M15

Evolution versus Pulsation along the Horizontal Branch of M15. Norman R. Simon. 387, 162, 39-A3 (1992)

NGC Number: NGC 5466

Modeling of the Eclipsing Binaries in the Globular Cluster NGC 5466.

J. Kallrath, E. F. Milone, & C. R. Stagg. 389, 590, 68-G1 (1992)

NGC Number: NGC 6624

Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)

xxvi

Name: Palomar 12

Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

Name: Ruprecht 106

Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

GALAXY: HALO

Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)

Young Globular Clusters in the Milky Way Galaxy. D. N. C. Lin & Harvey B. Richer. 388, L57, 59-C1 (1992)

On the Galactic Disk and Halo Models of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992)

GALAXY: KINEMATICS AND DYNAMICS

Galactic Structure from the Spacelab Infrared Telescope. III. A Dynamical Model for the Milky Way Bulge. S. M. Kent. 387, 181, 39-B12 (1992)

Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362, 54-G8 (1992)

GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: GENERAL

Chemical Composition of Open Clusters. III. Iron and Carbon in F Dwarfs in Coma, Praesepe, and M67. Eileen D. Friel & Ann Merchant Boesgaard. 387, 170, 39-A13 (1992)

GALAXY: STELLAR CONTENT

Constraints on Baryonic Dark Matter in the Galactic Halo and Local Group. D. Richstone, A. Gould, P. Guhathakurta, & C. Flynn. 388, 354, 54-F12 (1992)

On the Galactic Disk and Halo Models of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992)

GALAXY: STRUCTURE

Would a Galactic Bar Destroy the Globular Cluster System? Kevin Long, Jeremiah P. Ostriker, & Luis Aguilar. 388, 362, 54-G8 (1992)

Galactic Disks, Infall, and the Global Value of Ω. G. Tóth & J. P. Ostriker. 389, 5, 60-B6 (1992)

Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)

GAMMA RAYS: BURSTS

Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)

Gamma-Ray Bursis and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)

On the Cosmological Origin of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 388, L45, 59-A9 (1992)

On the Galactic Disk and Halo Models of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992)

Gravitational Lensing, Time Delay, and Gamma-Ray Bursts. Shude Mao. 389, L41, 73-B1 (1992)

The Implications of the Compton (GRO) Observations for Cosmological Gamma-Ray Bursts. Tsvi Piran. 389, L45, 73-B6 (1992)

Gamma-Ray Bursts from Planet-Magnetosphere Systems around Neutron Stars. Hitoshi Hanami. 389, L71, 73-D11 (1992)

GAMMA RAYS: OBSERVATIONS

HEAO 3 Limits on the ⁴⁴Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)

Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line. R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, S. Grebenev, R. Kremnev, K. Sukhanov, A. Goldwurm, J. Ballet, B. Cordier, J. Paul, M. Denis, G. Vedrenne, M. Niel, & E. Jourdain. 389, L75, 73-E1 (1992)

SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line. A. Goldwurm, J. Ballet, B. Cordier, J. Paul, L. Bouchet, J. P. Roques, D. Barret, P. Mandrou, R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, V. Kovtunenko, R. Kremnev, & K. Sukhanov. 389, L79, 73-E6 (1992)

GAMMA RAYS: THEORY

π⁰-Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6 (1992)

Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)

GRAVITATION

Constraints on the Power Spectrum of the Primordial Density Field from Large-Scale Data: Microwave Background and Predictions of Inflation. A. Kashlinsky. 387, L1, 43-A8 (1992)

Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)

HYDRODYNAMICS

Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)

Postexplosion Hydrodynamics of SN 1987A. Marc Herant & Willy Benz. 387, 294, 40-E9 (1992)

Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)

Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)

Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1 (1992)

Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992)

Self-similar Solutions and the Stability of Collapsing Isothermal Filaments. Shu-ichiro Inutsuka & Shoken M. Miyama. 388, 392, 55-C1 (1992)

A Test Suite for Magnetohydrodynamical Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)

Convective Instability in Differentially Rotating Disks. Dongsu Ryu & Jeremy Goodman. 388, 438, 55-F12 (1992)

The Stability of Accretion Tori. IV. Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1 (1992)

Dynamics of Ultraharmonic Resonances in Spiral Galaxies. Pawel Artymowicz & Stephen H. Lubow. 389, 129, 61-F1 (1992)

On the Interior Structure of Contact Binaries and the Light-Curve Paradox. Jean-Louis Tassoul. 389, 375, 64-E9 (1992)

Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)

Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)

Downflows and Entropy Gradient Reversal in Deep Convection. Kwing L. Chan & Detlef Gigas. 389, L87, 73-F3 (1992)

INFRARED: GALAXIES

A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992)

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

X-Ray Properties of Bright Far-Infrared Galaxies. L. P. David, C. Jones, & W. Forman. 388, 82, 50-B4 (1992)

The Density Evolution of IRAS Galaxies. Karl B. Fisher, Michael A. Strauss, Marc Davis, Amos Yahil, & John P. Huchra. 389, 188, 62-C11 (1992)

Near-Infrared Spectra and Classification Diagnostics of Seyfert Galaxies. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 196, 62-D7 (1992)

Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball,

xxvii

John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9

INFRARED: GENERAL

- Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)
- Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11

INFRARED: INTERSTELLAR: CONTINUUM

- The Luminosity of the Galactic Center. J. A. Davidson, M. W. Werner, X. Wu, D. F. Lester, P. M. Harvey, M. Joy, & M. Morris. 387, 189, 39-C8 (1992)
- The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)
- Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)
- The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)
- Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

INFRARED: INTERSTELLAR: LINES

- The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)
- Infrared Emission Spectra of Benzene and Naphthalene: Implications for the Interstellar Polycyclic Aromatic Hydrocarbon Hypothesis. Jerrell D. Brenner & John R. Barker. 388, L39, 52-D6 (1992)
- Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618. William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H. Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)

INFRARED: STARS

- Gravitational Lensing by a Massive Black Hole at the Galactic Center. Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)
- The 3 Micron Spectrum of the Classical Be Star β Monocerotis A.
- K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)
 Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)

INSTABILITIES

- Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)
- Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)
- Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5
- On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)
- Asymmetric Morphology of the Propagating Jet. II. The Effect of Atmospheric Gradients. Philip E. Hardee, Raymond E. White III, Michael L. Norman, Michael A. Cooper, & David A. Clarke. 387, 460, 44-D8 (1992)
- Radiative Instabilities and 1000 Second Fluctuations in Astrophysical Masers. Gerardo A. Scappaticci & William D. Watson. 387, L73, 48-C10 (1992)
- Convective Instability in Differentially Rotating Disks. Dongsu Ryu & Jeremy Goodman. 388, 438, 55-F12 (1992)
- The Stability of Accretion Tori. IV. Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1 (1992)
- Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

INSTRUMENTATION: DETECTORS

A Rotating Tomographic Imager for Solar Extreme-Ultraviolet/Soft X-Ray Emission. Joseph M. Davila & W. T. Thompson. 389, L91, 73-F8 (1992)

INSTRUMENTATION: PHOTOMETERS

A Bolometric Millimeter-Wave System for Observations of Anisotropy in the Cosmic Microwave Background Radiation on Medium Angular Scales. M. L. Fischer, D. C. Alsop, E. S. Cheng, A. C. Clapp, D. A. Cottingham, J. O. Gundersen, T. C. Koch, E. Kreysa, P. R. Meinhold, A. E. Lange, P. M. Lubin, P. L. Richards, & G. F. Smoot. 388, 242, 53-C11 (1992)

INTERGALACTIC MEDIUM

- Magnetic Fields in Damped Lya Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)
- The Efficiency of Galaxy Formation in Clusters. Laurence P. David & George R. Blumenthal. 389, 510, 67-G1 (1992)
- X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

INTERPLANETARY MEDIUM

- Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Dröge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992)
- Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

INTERSTELLAR: MATTER

The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

ISM: ABUNDANCES

- The Oscillator Strength of the Si II 3s23p 2P-3s3p2 2D Multiplet and the Interstellar Abundance of Silicon. P. L. Dufton, F. P. Keenan, A. Hibbert, P. C. Ojha, & R. P. Stafford. 387, 414, 42-B1 (1992)
- A Survey of N2H+ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)
- Detection of SiN in IRC +10216. B. E. Turner. 388, L35, 52-D1 (1992) Faint Emission Lines in the Spectrum of the Orion Nebula and the Abundances of Some of the Rarer Elements. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 305, 63-F11 (1992)

ISM: BUBBLES

- Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1
- Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992)

ISM: CLOUDS

Self-similar Solutions and the Stability of Collapsing Isothermal Filaments. Shu-ichiro Inutsuka & Shoken M. Miyama. 388, 392, 55-C1 (1992)

ISM: COSMIC RAYS

Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)

ISM: DUST, EXTINCTION

- Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)
- Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)
- Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justtanont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)
- Quasar Absorption Lines with a Nonzero Cosmological Constant. Edwin L. Turner & Satoru Ikeuchi. 389, 478, 67-D7 (1992)

Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992) ISM: GENERAL

Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5

Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morion S. Roberts. 387, 484, 44-F9 (1992)

Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)

Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602. 69-A1 (1992)

ISM: HII REGIONS

Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O 1] Line. C. R. O'Dell & Zheng Wen. 387, 229, 39-F10 (1992)

Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992) The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas,

D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)

High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)

Dense Clumps of Ionized Gas near # Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins, 388, 495, 56-D9 (1992)

Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies:

Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H 11 Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992) ISM: INDIVIDUAL

Name: Orion Nebula

Faint Emission Lines in the Spectrum of the Orion Nebula and the Abundances of Some of the Rarer Elements. Donald E. Osterbrock, Hien D. Tran, & Sylvain Veilleux. 389, 305, 63-F11 (1992)

Name: Sagittarius B2

High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, & P. M. Harvey. 389, 338, 64-B7 (1992)

NGC Number: NGC 2024

High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)

Orion B (NGC 2024). III. BIMA SO $J_K = 2_2 \rightarrow 1_1$ Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)

NGC Number: NGC 7538

Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992) Alphanumeric: CRL 2136

Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O 1] Line. C. R. O'Dell & Zheng Wen. 387, 229, 39-F10 (1992)

The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)

Alphanumeric: DR 21

Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

Synthesis Imaging of the DR 21 (OH) Cluster. II. Thermal Ammonia and Water Maser Emission. Jeffrey G. Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)

Alphanumeric: G5.89-0.39

Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

Alphanumeric: L1551 IRS 5

The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)

Alphanumeric: Sh 187

The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)

ISM: JETS AND OUTFLOWS

Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

Properties of Swept-up Molecular Outflows. Colin R. Masson & Lawrence M. Chernin. 387, L47, 43-F1 (1992)

The Magnetic Collimation of Bipolar Outflows. I. Adiabatic Simulations. James M. Stone & Michael L. Norman. 389, 297, 63-F1 (1992)

The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

Jet Formation in the Transition from the Asymptotic Giant Branch to Planetary Nebulae. Noam Soker. 389, 628, 69-C1 (1992)

ISM: KINEMATICS AND DYNAMICS

Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O 1] Line. C. R. O'Dell & Zheng Wen. 387, 229, 39-F10 (1992)

Spectroscopy of Emission-Line Nebulae in Powerful Radio Galaxies: Interpretation. S. A. Baum, T. M. Heckman, & W. van Breugel. 389, 208, 62-E7 (1992)

ISM: MAGNETIC FIELDS

Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

Effect of an Ensemble of Explosions on the Galactic Dynamo. I. General Formulation. Katia Ferrière. 389, 286, 63-E1 (1992)

Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602, 69-A1 (1992)

ISM: MOLECULES

Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992)

A Survey of N₂H⁺ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)

Dense Molecular Gas and Starbursts in Ultraluminous Galaxies. P. M. Solomon, D. Downes, & S. J. E. Radford. 387, L55, 48-B1 (1992)

The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)

Infrared Emission Spectra of Benzene and Naphthalene: Implications for the Interstellar Polycyclic Aromatic Hydrocarbon Hypothesis. Jerrell D. Brenner & John R. Barker. 388, L39, 52-D6 (1992)

Synthesis Imaging of the DR 21 (OH) Cluster. II. Thermal Ammonia and Water Maser Emission. Jeffrey G. Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)

Orion B (NGC 2024). III. BIMA SO $J_K = 2_2 \rightarrow 1_1$ Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)

High Angular Resolution Far-Infrared Observations of Sagittarius B2. Paul F. Goldsmith, Dariusz C. Lis, D. F. Lester, & P. M. Harvey. 389, 338, 64-B7 (1992)

ISM: PLANETARY NEBULAE: GENERAL

Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)

A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389,

27, 60-D1 (1992)

Improved Calculations for the C III λλ1907,1909 and Si III λλ1883,1892
Electron Density Sensitive Emission-Line Ratios, and a Comparison with IUE Observations. F. P. Keenan, W. A. Feibelman, & K. A. Berrington. 389, 443, 65-D5 (1992)

Jet Formation in the Transition from the Asymptotic Giant Branch to Planetary Nebulae. Noam Soker. 389, 628, 69-C1 (1992)

N III Line Emission in Planetary Nebulae: Continuum Fluorescence. G. J. Ferland. 389, L63, 73-D1 (1992)

ISM: PLANETARY NEBULAE: INDIVIDUAL

Alphanumeric: AFGL 618

Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618.

William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H.

Black, G. H. Rieke, & M. J. Rieke. 389, 347, 64-C3 (1992)

ISM: REFLECTION NEBULAE

The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)

ISM: STRUCTURE

Motion at the Ionization Front in the Orion Nebula: A Kinematic Study of the [O 1] Line. C. R. O'Dell & Zheng Wen. 387, 229, 39-F10 (1992)

Synthesis Imaging of the DR 21 (OH) Cluster. II. Thermal Ammonia and Water Maser Emission. Jeffrey G. Mangum, Alwyn Wootten, & Lee G. Mundy. 388, 467, 56-B6 (1992)

High Spatial Resolution 1.3 Centimeter Imaging of the NGC 2024 Star-forming Region. R. A. Gaume, K. J. Johnston, & T. L. Wilson. 388, 489, 56-D1 (1992)

Dense Clumps of Ionized Gas near π Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins. 388, 495, 56-D9 (1992)

Orion B (NGC 2024). III. BIMA SO $J_K = 2_2 \rightarrow 1_1$ Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)

The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)

ISM: SUPERNOVA REMNANTS

The [O 1] λλ6300,6364 Doublet of SN 1987A. Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)

G203.2-12.3: A New Optical Supernova Remnant in Orion. P. Frank Winkler & Bo Reipurth. 389, L25, 66-D1 (1992)

On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ring-shaped Supernova Remnant. Giovanni F. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)

LINE FORMATION

Anisotropic Line Emission and the Geometry of the Broad-Line Region in Active Galactic Nuclei. G. J. Ferland, B. M. Peterson, K. Horne, W. F. Welsh, & S. N. Nahar. 387, 95, 38-C1 (1992)

The [O I] λλ6300,6364 Doublet of SN 1987A. Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)

N III Line Emission in Planetary Nebulae: Continuum Fluorescence. G. J. Ferland. 389, L63, 73-D1 (1992)

LINE: FORMATION

The Sobolev Approximation for Line Formation with Partial Frequency Redistribution. D. G. Hummer & G. B. Rybicki. 387, 248, 40-A10 (1992)

On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)

LINE: IDENTIFICATION

The 3 Micron Spectrum of the Classical Be Star β Monocerotis A. K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)

Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992)

xxix

The Comet-Tail (A-X) System of CO+: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_i$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)

LINE: PROFILES

Virial and Jet-induced Velocities in Seyfert Galaxies. II. Galaxy Rotation as Virial Parameter. Mark Whittle. 387, 109, 38-D2 (1992)

Virial and Jet-induced Velocities in Seyfert Galaxies. III. Galaxy Luminosity as Virial Parameter. Mark Whittle. 387, 121, 38-E1 (1992)

Properties of Swept-up Molecular Outflows. Colin R. Masson & Lawrence M. Chernin. 387, L47, 43-F1 (1992)

What Caused an Unusually Broad He | 10830 Å Emission Line in a Solar Limb Flare? J. Q. You & G. K. Oertel. 389, L33, 66-E1 (1992)

Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

MAGNETIC FIELDS

Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

MAGNETOHYDRODYNAMICS: MHD

Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5 (1992)

Large Electric Fields in Acoustic Waves and the Stimulation of Lightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)

Weighted Current Sheets Supported in Normal and Inverse Configurations: A Model for Prominence Observations. P. Démoulin & T. G. Forbes. 387, 394, 41-G5 (1992)

Energy Propagation into a Flare Kernel during a Solar Flare. D. B. Melrose. 387, 403, 42-A1 (1992)

Angular Momentum Transport in Magnetized Stellar Radiative Zones.

 Numerical Solutions to the Core Spin-up Model Problem.
 P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)

Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)

Structure of Sunspot Penumbrae: Fallen Magnetic Flux Tubes.

Donat G. Wentzel. 388, 211, 51-E11 (1992)

A Test Suite for Magnetohydrodynamical Simulations. James M. Stone, John F. Hawley, Charles R. Evans, & Michael L. Norman. 388, 415, 55-E1 (1992)

Photon Bubbles: Overstability in a Magnetized Atmosphere. *Jonathan Arons.* 388, 561, 57-C1 (1992)

Alfvén Wave Transmission through the Solar Atmosphere. Philippe L. Similon & Shahrokh Zargham. 388, 644, 58-C1 (1992)

Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

Effect of an Ensemble of Explosions on the Galactic Dynamo. I. General Formulation. Katia Ferrière. 389, 286, 63-E1 (1992)

Taylor Relaxation of a Gold-Hoyle Flux Tube. G. J. Rickard. 389, 413, 65-A10 (1992)

Magnetohydrodynamic Waves in Sharply and Smoothly Bounded Cylinders. Bonnie Jean Shulman & Ellen G. Zweibel. 389, 428 65-C1 (1992)

Alfvénically Driven Slow Shocks in the Solar Chromosphere and Corona. Joseph V. Hollweg. 389, 731, 70-D10 (1992)

High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. Natalie Mandzhavidze & Reuven Ramaty. 389, 739, 70-E6 (1992)

Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)

MASERS

Are the NGC 7538 Formaldehyde Masers Really Unusual? Preethi Pratap, Lewis E. Snyder, & Wolfgang Batrla. 387, 241, 40-A1 (1992)

Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)

Radiative Instabilities and 1000 Second Fluctuations in Astrophysical Masers. Gerardo A. Scappaticci & William D. Watson. 387, L73, 48-C10 (1992)

METEOROIDS

Large Electric Fields in Acoustic Waves and the Stimulation of Lightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)

METHODS: ANALYTICAL

A Topological/Geometrical Approach to the Study of Astrophysical Maps. Fred C. Adams. 387, 572, 45-G1 (1992)

METHODS: DATA ANALYSIS

A Topological/Geometrical Approach to the Study of Astrophysical Maps. Fred C. Adams. 387, 572, 45-G1 (1992)

On the Ultimate Accuracy of Solar Oscillation Frequency Measurements. K. G. Libbrecht. 387, 712, 47-E7 (1992)

METHODS: NUMERICAL

The Topology of Large-Scale Structure. VI. Slices of the Universe. Changbom Park, J. Richard Gott III, Adrian L. Melott, & I. D. Karachentsev. 387, 1, 37-A11 (1992)

Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E. Sulkanen. 387, 83, 38-B1 (1992)

Large-Scale Structure in Isocurvature Baryon Models. Tatsushi Suginohara & Yasushi Suto. 387, 431, 44-B1 (1992)

A Topological/Geometrical Approach to the Study of Astrophysical Maps. Fred C. Adams. 387, 572, 45-G1 (1992)

Angular Momentum Transport in Magnetized Stellar Radiative Zones.

 Numerical Solutions to the Core Spin-up Model Problem.
 P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)

Wavelet Analysis of Subclustering: An Illustration, Abell 754. Eric Escalera & Alain Mazure. 388, 23, 49-C12 (1992)

Time Variability Studies with Photon-counting Imaging Detectors. I. A Maximum Likelihood Technique. S. Sciortino & G. Micela. 388, 595, 57-E11 (1992)

The GDDSYN Light Curve Synthesis Method. Paul D. Hendry & Stefan W. Mochnacki. 388, 603, 57-F7 (1992)

Clustering of Galaxy Clusters. I. Is the Spatial Cluster-Cluster Correlation Function Enhanced Significantly by Contaminations? Yi-Peng Jing, Manolis Plionis, & Riccardo Valdarnini. 389, 499, 67-F3 (1992)

Three-dimensional Hydrodynamical Simulations of Colliding Stars. III. Collisions and Tidal Captures of Unequal-Mass Main-Sequence Stars. W. Benz & J. G. Hills. 389, 546, 68-C8 (1992)

Cooling and the Longevity of Polar Rings. Neal Katz & Hans-Walter Rix. 389, L55, 73-C3 (1992)

METHODS: STATISTICAL

Time Variability Studies with Photon-counting Imaging Detectors. I.

A Maximum Likelihood Technique. S. Sciortino & G. Micela. 388, 595, 57-E11 (1992)

MOLECULAR DATA

The Comet-Tail (A-X) System of CO⁺: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_i$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)

MOLECULAR PROCESSES

A Survey of N₂H⁺ in Dense Clouds: Implications for Interstellar Nitrogen and Ion-Molecule Chemistry. M. Womack, L. M. Ziurys, & S. Wyckoff. 387, 417, 42-B6 (1992)

Detection of SiN in IRC +10216. B. E. Turner. 388, L35, 52-D1 (1992) Near-Ultraviolet Spectroscopy of Comet Austin (1989c1). Jacobus H. Valk, C. R. O'Dell, Anita L. Cochran, William D. Cochran, Chet B. Opal, & Edwin S. Barker. 388, 621, 58-A1 (1992) Orion B (NGC 2024). III. BIMA SO $J_K=2_2 \rightarrow 1_1$ Observations: Evidence for Peculiar Sulfur Chemistry. Peter J. Barnes & Richard M. Crutcher. 389, 325, 64-A5 (1992)

Near-Infrared Observations of the Proto-Planetary Nebula AFGL 618.

William B. Latter, Philip R. Maloney, Douglas M. Kelly, John H.

Black, G. H. Rieke, & M. J. Rieke, 389, 347, 64-C3 (1992)

NEBULAE: INDIVIDUAL

Alphanumeric: CTB 109

The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

NEBULAE: SUPERNOVA REMNANTS

The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

NUCLEAR REACTIONS, NUCLEOSYNTHESIS, ABUN-DANCES

Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)

A Measurement of the $^{14}C(n,\gamma)^{15}C$ Cross Section at a Stellar Temperature of kT=23.3 keV. Hermann Beer, M. Wiescher, F. Käppeler, J. Görres, & P. E. Koehler. 387, 258, 40-B8 (1992)

s-Processing in Massive Stars as a Function of Metallicity and Interpretation of Observational Trends. C. M. Raiteri, R. Gallino, & M. Busso. 387, 263, 40-C1 (1992)

HEAO 3 Limits on the ⁴⁴Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)

Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)

Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)

CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)

Limits on a Possible Violation of the Strong Equivalence Principle from Primordial Nucleosynthesis. A. Serna & R. Domínguez-Tenreiro. 389, 1, 60-B1 (1992)

Possible Sources of the Population I Lithium Abundance and Light-Element Evolution. Lawrence E. Brown. 389, 251, 63-B1 (1992)

Measurement of the ⁷⁶Se(n, γ) Capture Cross Section and Phenomenological s-Process Studies: The Weak Component. Hermann Beer, G. Walter, & F. Käppeler. 389, 784, 71-B1 (1992)

NUCLEOSYNTHESIS

Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11 (1992)

OCCULTATIONS

10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8 (1992)

PLANETS AND SATELLITES: GENERAL

Gamma-Ray Bursts from Planet-Magnetosphere Systems around Neutron Stars. Hitoshi Hanami. 389, L71, 73-D11 (1992)

PLANETS AND SATELLITES: INDIVIDUAL

Jupiter

The Abundance and Distribution of Water Vapor in the Jovian Troposphere as Inferred from Voyager IRIS Observations. Barbara E. Carlson, Andrew A. Lacis, & William B. Rossow. 388, 648, 58-C7 (1992)

PLASMAS

Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)

Close Encounters in Coulomb and Gravitational Scattering. I. Relaxation of Isotropic Test-Particle Distributions by Like-Particle Collisions. Edward C. Shoub. 389, 558, 68-D8 (1992)

POLARIZATION

The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M.

Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)

Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)

A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts,

& J. F. C. Wardle. 388, 40, 49-E5 (1992)

Dust within Globular Clusters: A Large Bubble in NGC 6624? Juan C. Forte, Sergio A. Cellone, Mariano Méndez, & E. Irene Vega. 388, 383, 55-B4 (1992)

Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

Infrared Polarimetry and the Galactic Magnetic Field. II. Improved Models. Terry Jay Jones, Dimitri Klebe, & John M. Dickey. 389, 602, 69-A1 (1992)

Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

RADIATION MECHANISMS: BREMSSTRAHLUNG

EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1 (1992)

Stellar Wind Collision and X-Ray Generation in Massive Binaries. V.V. Usov. 389, 635, 69-C10 (1992)

RADIATION MECHANISMS: COMPTON AND INVERSE COMPTON

Energy Dependence of Normal Branch Quasi-periodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)

RADIATION MECHANISMS: MISCELLANEOUS

π⁰-Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6 (1992)

Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, & N. Panchapakesan. 388, 131, 50-F1 (1992)

RADIATION MECHANISMS: THERMAL

Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justianont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)

RADIATIVE TRANSFER

The Sobolev Approximation for Line Formation with Partial Frequency Redistribution. D. G. Hummer & G. B. Rybicki. 387, 248, 40-A10 (1992)

A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)

Radiative Instabilities and 1000 Second Fluctuations in Astrophysical Masers. Gerardo A. Scappaticci & William D. Watson. 387, L73,

48-C10 (1992)

Ionization and Excitation in Cool Giant Stars. I. Hydrogen and Helium. Donald G. Luttermoser & Hollis R. Johnson. 388, 579, 57-D7 (1992)

X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)

RADIO CONTINUUM: GALAXIES

Luminosity Functions, Relativistic Beaming, and Unified Theories of High-Luminosity Radio Sources. P. Padovani & C. M. Urry. 387, 449, 44-C9 (1992)

Reconciling the Image Brightness Ratios in the Gravitational Lens System 0957+561. Samuel R. Conner, Joseph Lehár, & Bernard F. Burke. 387, L61, 48-B7 (1992)

A Survey of the Milliarcsecond Polarization Properties of BL Lacertae Objects at 5 GHz. D. C. Gabuzda, T. V. Cawthorne, D. H. Roberts, & J. F. C. Wardle. 388, 40, 49-E5 (1992)

Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)

X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

RADIO CONTINUUM: INTERSTELLAR

Gravitational Lensing by a Massive Black Hole at the Galactic Center.

Mark Wardle & Farhad Yusef-Zadeh. 387, L65, 48-C1 (1992)

RADIO CONTINUUM: STARS

Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)

Observations of Symbiotic Stars at Millimeter and Submillimeter Wavelengths. E. R. Seaquist & A. R. Taylor. 387, 624, 46-D5 (1992)

First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)

RADIO LINES: ATOMIC

Luminosity-Line Width Relations and the Extragalactic Distance Scale. I. Absolute Calibration. Michael J. Pierce & R. Brent Tully. 387, 47, 37-E8 (1992)

Atomic and Molecular Outflow in DR 21. A. P. G. Russell, J. Bally, R. Padman, & R. E. Hills. 387, 219, 39-E13 (1992)

Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)

The Sharpless 187 Gas Complex: A Multifrequency Study. G. Joncas, D. Durand, & R. S. Roger. 387, 591, 46-A9 (1992)

Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)

Detection of the H92\alpha Radio Recombination Line from the Symbiotic Star H1-36 Arae. T. S. Bastian. 387, L77, 48-D1 (1992)

RADIO LINES: MOLECULAR: CIRCUMSTELLAR

Detection of SiN in IRC +10216. B. E. Turner. 388, L35, 52-D1 (1992)
The Magnetic Collimation of Bipolar Outflows. I. Adiabatic
Simulations. James M. Stone & Michael L. Norman. 389, 297,
63-F1 (1992)

RADIO LINES: MOLECULAR: INTERSTELLAR

Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)

RELATIVITY

Astrophysical Jets and Theories of Gravitation. Mario Livio & Nathan Rosen. 387, 458, 44-D5 (1992)

On Modeling a Relativistic Hierarchical (Fractal) Cosmology by Tolman's Spacetime. I. Theory. Marcelo B. Ribeiro. 388, 1, 49-B1 (1992)
 Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer.

388, 138, 50-F9 (1992)

Equilibrium Stellar Systems with Spindle Singularities. Stuart L. Shapiro & Saul A. Teukolsky. 388, 287, 53-G10 (1992)

Rotational Properties of Strange Stars. M. Colpi & J. C. Miller. 388, 513, 56-F1 (1992)

On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. James R. Ipser & Lee Lindblom. 389, 392, 64-G1 (1992)

SHOCK WAVES

Instabilities in Astrophysical Jets. I. Linear Analysis of Body and Surface Waves. Jun-Hui Zhao, Jack O. Burns, Philip E. Hardee, & Michael L. Norman. 387, 69, 37-G7 (1992)

Instabilities in Astrophysical Jets. II. Numerical Simulations of Slab Jets. Jun-Hui Zhao, Jack O. Burns, Michael L. Norman, & Martin E.

Sulkanen. 387, 83, 38-B1 (1992)

Standing Shocks in Accretion Disks and the Spectra of Active Galactic Nuclei. Sandip K. Chakrabarti & Paul J. Wiita. 387, L21, 43-C4 (1992)

The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuva Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)

Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1 (1992)

Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992) Magnetic Fields and Radiative Shocks in Protogalaxies and the Origin of Globular Clusters. Paul R. Shapiro, Alejandro Clocchiatti, & Hyesung Kang. 389, 269, 63-C11 (1992)

Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)

Stellar Wind Collision and X-Ray Generation in Massive Binaries. V. V. Usov. 389, 635, 69-C10 (1992)

Alfvénically Driven Slow Shocks in the Solar Chromosphere and Corona. Joseph V. Hollweg. 389, 731, 70-D10 (1992)

SOLAR SYSTEM: FORMATION

Large Electric Fields in Acoustic Waves and the Stimulation of ightning Discharges. W. Pilipp, T. W. Hartquist, & G. E. Morfill. 387, 364, 41-D13 (1992)

STARS: ABUNDANCES

Chemical Composition of Open Clusters. III. Iron and Carbon in F Dwarfs in Coma, Praesepe, and M67. Eileen D. Friel & Ann Merchant Boesgaard. 387, 170, 39-A13 (1992)

HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)

CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)

Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars. Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)

The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)

STARS: ACTIVITY

First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)

STARS: ATMOSPHERES

On the Influence of the Convective Efficiency on the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1 (1992)

Photon Bubbles: Overstability in a Magnetized Atmosphere. Jonathan Arons. 388, 561, 57-C1 (1992)

Ionization and Excitation in Cool Giant Stars. I. Hydrogen and Helium. Donald G. Luttermoser & Hollis R. Johnson. 388, 579, 57-D7 (1992)

STARS: BINARIES: CLOSE

Rare Thermonuclear Explosions in Short-Period Cataclysmic Variables, with Possible Application to the Nova-like Red Variable in the Galaxy M31. Icko Iben, Jr., & Alexander V. Tutukov. 389, 369, 64-E1 (1992)

On the Interior Structure of Contact Binaries and the Light-Curve Paradox. Jean-Louis Tassoul. 389, 375, 64-E9 (1992)

The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line. A. Goldwurm, J. Ballet, B. Cordier, J. Paul, L. Bouchet, J. P. Roques, D. Barret, P. Mandrou, R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, V. Kovtunenko, R. Kremnev, & K. Sukhanov. 389, L79, 73-E6 (1992)

STARS: BINARIES: ECLIPSING

Consequences of the Star-Stream Interaction in Algol. Mercedes T. Richards. 387, 329, 41-A12 (1992)

Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)

PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)

Secondaries of Eclipsing Binaries. VII. The Spectroscopic Triple and Visual Double V505 Sagittarii. Jocelyn Tomkin. 387, 631, 46-E1

Orbital Angular Momentum Loss in PSR 1957+20. Menashe Banit & Jacob Shaham. 388, L19, 52-B11 (1992)

The GDDSYN Light Curve Synthesis Method. Paul D. Hendry & Stefan W. Mochnacki, 388, 603, 57-F7 (1992)

Modeling of the Eclipsing Binaries in the Globular Cluster NGC 5466. J. Kallrath, E. F. Milone, & C. R. Stagg. 389, 590, 68-G1 (1992)

X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)

STARS: BINARIES: GENERAL

Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4. C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)

The Evolution of a Primordial Binary Population in a Globular Cluster. Piet Hut, Steve McMillan, & Roger W. Romani. 389, 527,

Jet Formation in the Transition from the Asymptotic Giant Branch to Planetary Nebulae. Noam Soker. 389, 628, 69-C1 (1992)

Stellar Wind Collision and X-Ray Generation in Massive Pinaries. V. V. Usov. 389, 635, 69-C10 (1992)

STARS: BINARIES: SPECTROSCOPIC

TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

Spectroscopic Observations of the Catachysmic Variable PG 0917+342: An Ultra-Short-Period Nova-like System. Danuta Dobrzycka & Steve B. Howell. 388, 614, 57-G6 (1992)

New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

STARS: BINARIES: SYMBIOTIC

Observations of Symbiotic Stars at Millimeter and Submillimeter Wavelengths. E. R. Seaquist & A. R. Taylor. 387, 624, 46-D5 (1992)

Improved Calculations for the C III λλ1907,1909 and Si III λλ1883,1892 Electron Density Sensitive Emission-Line Ratios, and a Comparison with IUE Observations. F. P. Keenan, W. A. Feibelman, & K. A. Berrington. 389, 443, 65-D5 (1992)

The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

Fe 11 Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)

STARS: BINARIES: VISUAL

Secondaries of Eclipsing Binaries. VII. The Spectroscopic Triple and Visual Double V505 Sagittarii. Jocelyn Tomkin. 387, 631, 46-E1 (1992)

STARS: CARBON

High Spatial Resolution Maps of Circumstellar SiC2 in IRC +10216. P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)

STARS: CEPHEIDS

Luminosity-Line Width Relations and the Extragalactic Distance Scale. I. Absolute Calibration. Michael J. Pierce & R. Brent Tully. 387, 47, 37-E8 (1992)

STARS: CHROMOSPHERES

Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

STARS: CIRCUMSTELLAR MATTER

Consequences of the Star-Stream Interaction in Algol. Mercedes T. Richards. 387, 329, 41-A12 (1992)

10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, L43, 43-E8 (1992)

Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)

Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)

Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)

- High Spatial Resolution Maps of Circumstellar SiC₂ in IRC +10216. P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)
- The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

STARS: CIRCUMSTELLAR SHELLS

Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

STARS: CORONAE

- Inhibition of Electron Thermal Conduction by Electromagnetic Instabilities. Amir Levinson & David Eichler. 387, 212, 39-E5 (1992)
- X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants.

 G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)
- First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)
- Time Variability Studies with Photon-counting Imaging Detectors. I. A Maximum Likelihood Technique. S. Sciortino & G. Micela. 388, 595, 57-E11 (1992)
- ROSAT X-Ray All-Sky Survey Observations of Hybrid Stars. Bernhard Haisch, J. H. M. M. Schmitt, & C. Rosso. 388, L61, 59-C7 (1992)
- On the Density and Field Sensitivities of Dielectronic Recombination.

 Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L.

 Kohl. 389, L37, 66-E5 (1992)

STARS: EARLY-TYPE

- Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars.

 Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)
- π^0 -Decay Gamma-Ray Emission from Winds of Massive Stars. Richard L. White & Wan Chen. 387, L81, 48-D6 (1992)
- Stellar Wind Collision and X-Ray Generation in Massive Binaries. V.V. Usov. 389, 635, 69-C10 (1992)

STARS: EMISSION-LINE

N III Line Emission in Planetary Nebulae: Continuum Fluorescence. G. J. Ferland. 389, L63, 73-D1 (1992)

STARS: EMISSION-LINE, BE

- STARS, Edition of the Massive X-Ray Binary 4U 1700-37 = HD 153919.
 S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)
- PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)
- Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)
- The 3 Micron Spectrum of the Classical Be Star β Monocerotis A. K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)
- Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)
- The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

STARS: EVOLUTION

- On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)
- Unusual 3 Micron Emission Features in Three Proto-Planetary Nebulae. T. R. Geballe, A. G. G. M. Tielens, S. Kwok, & B. J. Hrivnak. 387, L89, 48-E1 (1992)
- X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants.

 G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)
- The Effect of Helium Diffusion on the Ages of Globular Clusters.

 Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H.

 Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)
- The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)
- The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)
- The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco

Castellani, Marco Limongi, & Amedeo Tornambè. 389, 227, 62-G1 (1992)

xxxiii

Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10 (1992)

STARS: FORMATION

- Evolution of Spiral Galaxies. I. Halo-Disk Connection for the Evolution of the Solar Neighborhood. Federico Ferrini, Francesca Matteucci, Chiara Pardi, & Umberto Penco. 387, 138, 38-F5 (1992)
- A Triggering Mechanism for Enhanced Star Formation in Colliding Galaxies. Chanda J. Jog & P. M. Solomon. 387, 152, 38-G6 (1992) Properties of Swept-up Molecular Outflows. Colin R. Masson &
- Lawrence M. Chernin. 387, L47, 43-F1 (1992)
 The Molecular Hydrogen Emission around L1551 IRS 5: Shock-Heated Molecular Gas at the Base of the Molecular Outflow. Takuya Yamashita & Motohide Tamura. 387, L93, 48-E5 (1992)
- The Star Formation History of the Large Magellanic Cloud. Gianpaolo Bertelli, Mario Mateo, Cesare Chiosi, & Alessandro Bressan. 388, 400, 55-C11 (1992)
- The Stability of Accretion Tori. IV. Fission and Fragmentation of Slender, Self-gravitating Annuli. Dimitris M. Christodoulou & Ramesh Narayan. 388, 451, 56-A1 (1992)
- Subarcsecond Mid-Infrared Imaging of the Nuclei of the Infrared Bright Galaxies NGC 1614 and NGC 7469. Eric Keto, Roger Ball, John Arens, Garrett Jernigan, & Margaret Meixner. 389, 223, 62-F9 (1992)
- The Juggler: A Three-lobed Near-Infrared Reflection Nebula toward CRL 2136 = OH 17.6+0.2. Joel H. Kastner, David A. Weintraub, & C. Aspin. 389, 357, 64-D1 (1992)
- Thermal Dust Imaging: The Onset of Asymmetry in the Ultracompact H II Region G5.89-0.39. Roger Ball, John F. Arens, J. Garrett Jernigan, Eric Keto, & Margaret M. Meixner. 389, 616, 69-B1 (1992)

STARS: FUNDAMENTAL PARAMETERS

- Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- A Theoretical Calibration of the Planetary Nebular Cosmic Distance Scale. Michael A. Dopita, George H. Jacoby, & E. Vassiliadis. 389, 27, 60-D1 (1992)
- New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

STARS: GIANT

- Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)
- Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justianont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)

STARS: HERTZSPRUNG-RUSSELL DIAGRAM

On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)

STARS: HORIZONTAL-BRANCH

The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)

STARS: INDIVIDUAL

Constellation Name: R Aquarii

The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

Constellation Name: TT Crateris

TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

Constellation Name: SS Cygni

Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

Constellation Name: B Monocerotis A

The 3 Micron Spectrum of the Classical Be Star β Monocerotis A. K. Sellgren & R. G. Smith. 388, 178, 51-B13 (1992)

xxxiv

Constellation Name: V505 Sagittarii

Secondaries of Eclipsing Binaries. VII. The Spectroscopic Triple and Visual Double V505 Sagittarii. *Jocelyn Tomkin*. 387, 631, 46-E1 (1992)

Constellation Name: π Scorpii

Dense Clumps of Ionized Gas near π Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins. 388, 495, 56-D9 (1992)

Constellation Name: DG Tauri

10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, LA3, 43-E8 (1992)

Henry Draper Number: HD 6833

Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

Henry Draper Number: HD 153919

Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)

Henry Draper Number: HD 191765

The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)

Name: Algol

Consequences of the Star-Stream Interaction in Algol. Mercedes T. Richards. 387, 329, 41-A12 (1992)

Alphanumeric: Ap 0323+4853

Spectroscopy of a Brown Dwarf Candidate in the α Persei Open Cluster. Rafael Rebolo, Eduardo L. Martín, & Antonio Magazzù. 389, L83, 73-E11 (1992)

Alphanumeric: H1-36

Detection of the H92α Radio Recombination Line from the Symbiotic Star H1-36 Arae. T. S. Bastian. 387, L77, 48-D1 (1992)

Alphanumeric: H0538+608

H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)

Alphanumeric: IRC +10216

High Spatial Resolution Maps of Circumstellar SiC₂ in IRC +10216.
P. D. Gensheimer, Lauren Likkel, & L. E. Snyder. 388, L31, 52-C11 (1992)

Alphanumeric: MWC 349A

Time Variations in Millimeter-Wave Radio Recombination Lines from the Be Star MWC 349A. M. A. Gordon. 387, 701, 47-D5 (1992)

Alphanumeric: PG 0917+342

Spectroscopic Observations of the Cataclysmic Variable PG 0917+342:

An Ultra-Short-Period Nova-like System. Danuta Dobrzycka & Steve B. Howell. 388, 614, 57-G6 (1992)

Alphanumeric: SN 1987A

- Postexplosion Hydrodynamics of SN 1987A. Marc Herant & Willy Benz. 387, 294, 40-E9 (1992)
- The [O i] \$\lambda 6300,6364 Doublet of SN 1987A. Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)
- Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

STARS: INTERIORS

- s-Processing in Massive Stars as a Function of Metallicity and Interpretation of Observational Trends. C. M. Raiteri, R. Gallino, & M. Busso. 387, 263, 40-C1 (1992)
- Postexplosion Hydrodynamics of SN 1987A. Marc Herant & Willy Benz. 387, 294, 40-E9 (1992)
- Angular Momentum Transport in Magnetized Stellar Radiative Zones.

 Numerical Solutions to the Core Spin-up Model Problem.
 P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)
- Effects of Fe/C Phase Separation on the Ages of White Dwarfs. Z. W. Xu & H. M. Van Horn. 387, 662, 47-A1 (1992)
- Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars. Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)
- The Effect of Helium Diffusion on the Ages of Globular Clusters.

 Brian Chaboyer, Constantine P. Deliyannis, Pierre Demarque, M. H.

 Pinsonneault, & Ata Sarajedini. 388, 372, 55-A6 (1992)

- The Contribution of Advanced Post-Hayashi Track Evolutionary Phases to the Ultraviolet Light of Elliptical Galaxies. Marco Castellani, Marco Limongi, & Amedeo Tornambè. 389, 227, 62-G1 (1992)
- On the Interior Structure of Contact Binaries and the Light-Curve Paradox. Jean-Louis Tassoul. 389, 375, 64-E9 (1992)
- Further Improvements of a New Model for Turbulent Convection in Stars, V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1 (1992)
- Downflows and Entropy Gradient Reversal in Deep Convection. Kwing L. Chan & Detlef Gigas. 389, L87, 73-F3 (1992)

STARS: KINEMATICS

Velocity Streaming of IRAS Main-Sequence Disk Stars and the Episodic Enhancement of Particulate Disks by Interstellar Clouds. Daniel P. Whitmire, John J. Matese, & Patrick G. Whitman. 388, 190, 51-D1 (1992)

STARS: LATE-TYPE

- CN and CH Variations on the M5 Subgiant Branch. Michael M. Briley, Graeme H. Smith, R. A. Bell, J. B. Oke, & James H. Hesser. 387, 612, 46-C5 (1992)
- X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants. G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)
- First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)
- Ionization and Excitation in Cool Giant Stars. I. Hydrogen and Helium. Donald G. Luttermoser & Hollis R. Johnson. 388, 579, 57-D7 (1992)
- Local Dark Matter from a Carefully Selected Sample. John N. Bahcall, Chris Flynn, & Andrew Gould. 389, 234, 62-G9 (1992)

STARS: LOW-MASS, BROWN DWARFS

- Candidate Brown Dwarfs in the Hyades. Claia Bryja, Terry J. Jones, Roberta M. Humphreys, Geoffrey Lawrence, Robert L. Pennington, & William Zumach. 388, L23, 52-C1 (1992)
- Spectroscopy of a Brown Dwarf Candidate in the α Persei Open Cluster. Rafael Rebolo, Eduardo L. Martín, & Antonio Magazzù. 389, L83, 73-E11 (1992)

STARS: MAGNETIC FIELDS

- Angular Momentum Transport in Magnetized Stellar Radiative Zones.

 I. Numerical Solutions to the Core Spin-up Model Problem.

 P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)
- Magnetic Fields in Damped Lyα Systems. A. M. Wolfe, K. M. Lanzetta, & A. L. Oren. 388, 17, 49-C5 (1992)
- First Conclusive Evidence for Rotational Modulation of Stellar Radio Emission. Jeremy Lim, Graham J. Nelson, Catarina Castro, David Kilkenny, & François van Wyk. 388, L27, 52-C7 (1992)

STARS: MASS LOSS

- The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992)
- An Accreting Black Hole Model for Sagittarius A*. Fulvio Melia. 387, L25, 43-C10 (1992)
- Properties of Swept-up Molecular Outflows. Colin R. Masson & Lawrence M. Chernin. 387, L47, 43-F1 (1992)
- Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)
- Dynamics of Wind Bubbles and Superbubbles. I. Slow Winds and Fast Winds. Bon-Chul Koo & Christopher F. McKee. 388, 93, 50-C1 (1992)
- Dynamics of Wind Bubbles and Superbubbles. II. Analytic Theory. Bon-Chul Koo & Christopher F. McKee. 388, 103, 50-C12 (1992)
- Mass Loss from OH/IR Stars: Models for the Infrared Emission of Circumstellar Dust Shells. K. Justianont & A. G. G. M. Tielens. 389, 400, 64-G10 (1992)
- Stellar Wind Collision and X-Ray Generation in Massive Binaries. V. V. Usov. 389, 635, 69-C10 (1992)

STARS: NEUTRON

Vortex Drag and the Spin-up Time Scale for Pulsar Glitches. Richard I. Epstein & Gordon Baym. 387, 276, 40-D1 (1992)

Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919.

S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)

Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)

Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)

Gamma-Ray Bursts and Cosmic Rays from Accretion-induced Collapse. Arnon Dar, Ben Zion Kozlowski, Shmuel Nussinov, & Reuven Ramaty. 388, 164, 51-A11 (1992)

Energy Dependence of Normal Branch Quasi-periodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)

CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)

Photon Bubbles: Overstability in a Magnetized Atmosphere. Jonathan Arons. 388, 561, 57-C1 (1992)

Rotating Stars: The Angular Momentum Constraints. Fernando de Felice & Leonardo Di G. Sigalotti. 389, 386, 64-F7 (1992)

Determining the Coherence of Micropulses. T. E. Strohmayer, J. M. Cordes, & H. M. Van Horn. 389, 685, 69-G12 (1992)

On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ring-shaped Supernova Remnant. Giovanni F. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)

Gamma-Ray Bursts from Planet-Magnetosphere Systems around Neutron Stars. Hitoshi Hanami. 389, L71, 73-D11 (1992)

STARS: NOVAE, CATACLYSMIC VARIABLES

TT Crateris: A Long-Period, Double-lined Dwarf Nova. Paula Szkody, Robert E. Williams, Bruce Margon, Steve B. Howell, & Mario Mateo. 387, 357, 41-D4 (1992)

Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)
Spectroscopic Observations of the Cataclysmic Variable PG 0917+342:

An Ultra-Short-Period Nova-like System. Danuta Dobrzycka & Steve B. Howell. 388, 614, 57-G6 (1992)

Rare Thermonuclear Explosions in Short-Period Cataclysmic Variables, with Possible Application to the Nova-like Red Variable in the Galaxy M31. Icko Iben, Jr., & Alexander V. Tutukov. 389, 369, 64-E1 (1992)

Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)

Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10 (1992)

Spectral Evolution of Accretion Disks of Dwarf Novae. III. Outburst Cycle of SS Cygni. F. H. Cheng & D. N. C. Lin. 389, 714, 70-C5 (1992)

STARS: OSCILLATIONS

Evolution versus Pulsation along the Horizontal Branch of M15. Norman R. Simon. 387, 162, 39-A3 (1992)

Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)

On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. James R. Ipser & Lee Lindblom. 389, 392, 64-G1 (1992)

New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

Determining the Coherence of Micropulses. T. E. Strohmayer, J. M. Cordes, & H. M. Van Horn. 389, 685, 69-G12 (1992)

STARS: PLANETARY SYSTEMS

Rocks around the Clock: Limits on Pulsar Planetary Systems. S. E. Thorsett & J. A. Phillips. 387, L69, 48-C6 (1992)

STARS: POPULATION II

Discovery of a Fast Wind from a Field Population II Giant Star. A. K. Dupree, Dimitar D. Sasselov, & John B. Lester. 387, L85, 48-D11 (1992)

Evolution of Beryllium Abundances in the Galactic Halo. Sean G. Ryan, John E. Norris, M. S. Bessell, & Constantine P. Deliyannis. 388, 184, 51-C6 (1992)

Evidence for Dwarf Stars at D ~ 100 Kiloparsecs near the Sextans Dwarf Spheroidal Galaxy. Andrew Gould, Puragra Guhathakurta, Douglas Richstone, & Chris Flynn. 388, 345, 54-F1 (1992)

STARS: POST-ASYMPTOTIC GIANT BRANCH

The Evolution of High-Metallicity Horizontal-Branch Stars and the Origin of the Ultraviolet Light in Elliptical Galaxies. E. Horch, P. Demarque, & M. Pinsonneault. 388, L53, 59-B7 (1992)

STARS: PRE-MAIN-SEQUENCE

10 AU Scale Halo Structure around DG Tauri. Wen Ping Chen, R. R. Howell, M. Simon, & J. A. Benson. 387, LA3, 43-E8 (1992)
Properties of Swept-up Molecular Outflows. Colin R. Masson &

Lawrence M. Chernin. 387, L47, 43-F1 (1992)

The Magnetic Collimation of Bipolar Outflows. I. Adiabatic Simulations. James M. Stone & Michael L. Norman. 389, 297, 63-F1 (1992)

Rotating Stars: The Angular Momentum Constraints. Fernando de Felice & Leonardo Di G. Sigalotti. 389, 386, 64-F7 (1992)

STARS: PULSARS: GENERAL

Vortex Drag and the Spin-up Time Scale for Pulsar Glitches. Richard I. Epstein & Gordon Baym. 387, 276, 40-D1 (1992)

Gamma-Ray Bursts and Radio Pulsar Glitches. D. Hartmann, K. Hurley, & M. Niel. 387, 622, 46-D1 (1992)

Rocks around the Clock: Limits on Pulsar Planetary Systems. S. E. Thorsett & J. A. Phillips. 387, L69, 48-C6 (1992)

Photodissociation in Strong Magnetic Fields and Application to Pulsars. V. B. Bhatia, Namrata Chopra, & N. Panchapakesan. 388, 131, 50-F1 (1992)

Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)

Determining the Coherence of Micropulses. T. E. Strohmayer, J. M. Cordes, & H. M. Van Horn. 389, 685, 69-G12 (1992)

STARS: PULSARS: INDIVIDUAL

Alphanumeric: X0115+634

The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)

Alphanumeric: PSR 1259-63

PSR 1259-63: A Binary Radio Pulsar with a Be Star Companion. Simon Johnston, R. N. Manchester, A. G. Lyne, M. Bailes, V. M. Kaspi, Qiao Guojun, & N. D'Amico. 387, L37, 43-E1 (1992)

Alphanumeric: PSR 1829-10

Rocks around the Clock: Limits on Pulsar Planetary Systems. S. E. Thorsett & J. A. Phillips. 387, L69, 48-C6 (1992)

Alphanumeric: PSR 1957+20

Orbital Angular Momentum Loss in PSR 1957+20. Menashe Banit & Jacob Shaham. 388, L19, 52-B11 (1992)

STARS: ROTATION

Angular Momentum Transport in Magnetized Stellar Radiative Zones.
I. Numerical Solutions to the Core Spin-up Model Problem.
P. Charbonneau & K. B. MacGregor. 387, 639, 46-E11 (1992)

Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars.

Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)

Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)

Rotational Properties of Strange Stars. M. Colpi & J. C. Miller. 388, 513, 56-F1 (1992)

On the Interior Structure of Contact Binaries and the Light-Curve Paradox. Jean-Louis Tassoul. 389, 375, 64-E9 (1992)

Rotating Stars: The Angular Momentum Constraints. Fernando de Felice & Leonardo Di G. Sigalotti. 389, 386, 64-F7 (1992)

On the Pulsations of Relativistic Accretion Disks and Rotating Stars: The Cowling Approximation. James R. Ipser & Lee Lindblom. 389, 392, 64-G1 (1992)

STARS: STATISTICS

On the Galactic Disk and Halo Models of Gamma-Ray Bursts. Shude Mao & Bohdan Paczyński. 389, L13, 66-C1 (1992) Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10

STARS: SUPERGIANTS

Carbon, Nitrogen, and Oxygen Abundances in Early B-Type Stars. Douglas R. Gies & David L. Lambert. 387, 673, 47-B1 (1992)

STARS: SUPERNOVAE

HEAO 3 Limits on the 44Ti Yield in Galactic Supernovae. W. A. Mahoney, J. C. Ling, W. A. Wheaton, & J. C. Higdon. 387, 314, 40-G5 (1992)

Line Fluorescence from the Ring around SN 1987A. Eli Dwek & James E. Felten. 387, 551, 45-E1 (1992)

STARS: SUPERNOVAE: GENERAL

Postexplosion Hydrodynamics of SN 1987A. Marc Herant & Willy Benz. 387, 294, 40-E9 (1992)

Type II-L Supernovae-Standard Bombs. C. Martin Gaskell. 389, L17, 66-C6 (1992)

G203.2-12.3: A New Optical Supernova Remnant in Orion. P. Frank Winkler & Bo Reipurth. 389, L25, 66-D1 (1992)

Can a Closure Mass Neutrino Help Solve the Supernova Shock Reheating Problem? George M. Fuller, R. Mayle, Bradley S. Meyer, & James R. Wilson. 389, 517, 67-G10 (1992)

Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10

STARS: SUPERNOVAE: INDIVIDUAL

Alphanumeric: SN 1987A

The [O 1] λλ6300,6364 Doublet of SN 1987A. Hongwei Li & Richard McCray. 387, 309, 40-F12 (1992)

Dust and Gas Contributions to the Energy Output of SN 1987A on Day 1153. E. Dwek, S. H. Moseley, W. Glaccum, J. R. Graham, R. F. Loewenstein, R. F. Silverberg, & R. K. Smith. 389, L21, 66-C11

Alphanumeric: SN 1991T

Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

STARS: VARIABLES: CEPHEIDS

On the Instability Strip of the Cepheid Stars. C. Chiosi, P. Wood, G. Bertelli, & A. Bressan. 387, 320, 41-A1 (1992)

New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

STARS: VARIABLES: OTHER

RR Lyrae

Evolution versus Pulsation along the Horizontal Branch of M15. Norman R. Simon. 387, 162, 39-A3 (1992)

Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4. C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)

STARS: WHITE DWARFS

On the Influence of the Convective Efficiency on the Determination of the Atmospheric Parameters of DA White Dwarfs. P. Bergeron, F. Wesemael, & G. Fontaine. 387, 288, 40-E1 (1992)

Modeling the Iron-dominated Spectra of the Type Ia Supernova SN 1991T at Premaximum. P. Ruiz-Lapuente, E. Cappellaro, M. Turatto, C. Gouiffes, I. J. Danziger, M. Della Valle, & L. B. Lucy. 387, L33, 43-D8 (1992)

Effects of Fe/C Phase Separation on the Ages of White Dwarfs. Z. W. Xu & H. M. Van Horn. 387, 662, 47-A1 (1992)

Diffusion and Mixing in Accreting White Dwarfs. Icko Iben, Jr., Masayuki Y. Fujimoto, & Jim MacDonald. 388, 521, 56-F11 (1992)

Type I Supernovae and Accretion-induced Collapses from Cataclysmic Variables? Mario Livio & James W. Truran. 389, 695, 70-A10 (1992)

H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)

STARS: WOLF-RAYET

The Wind Geometry of the Wolf-Rayet Star HD 191765. R. E. Schulte-Ladbeck, K. H. Nordsieck, M. Taylor, K. S. Bjorkman, A. M. Magalhães, & M. J. Wolff. 387, 347, 41-C6 (1992) An Accreting Black Hole Model for Sagittarius A*. Fulvio Melia. 387.

L25, 43-C10 (1992)

SUN: ABUNDANCES

Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feluman. 389, 764, 70-G7

Measurement of the $^{76}{\rm Se}(n,\gamma)$ Capture Cross Section and Phenomenological s-Process Studies: The Weak Component. Hermann Beer,

G. Walter, & F. Käppeler. 389, 784, 71-B1 (1992)

Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

SUN: ACTIVITY

Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Dröge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992) The 77 Day Periodicity in the Flare Rate of Cycle 22. T. Bai. 388, L69,

59-D3 (1992)

Large-Scale Flows and Solar Luminosity Variations. S. Arendt. 389, 421, 65-B6 (1992)

SUN: ATMOSPHERE

Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387, 707, 47-E1 (1992)

Alfvén Wave Transmission through the Solar Atmosphere. Philippe L. Similon & Shahrokh Zargham. 388, 644, 58-C1 (1992)

SUN: CHROMOSPHERE

Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)

Alfvénically Driven Slow Shocks in the Solar Chromosphere and Corona. Joseph V. Hollweg. 389, 731, 70-D10 (1992)

SUN: CORONA

Coronal Density and Temperature Structure from Coordinated Observations Associated with the Total Solar Eclipse of 1988 March 18. M. Guhathakurta, G. J. Rottman, R. R. Fisher, F. Q. Orrall, & R. C. Altrock. 388, 633, 58-B1 (1992)

Magnetohydrodynamic Waves in Sharply and Smoothly Bounded Cylinders. Bonnie Jean Shulman & Ellen G. Zweibel. 389, 428,

65-C1 (1992)

Alfvénically Driven Slow Shocks in the Solar Chromosphere and Corona. Joseph V. Hollweg. 389, 731, 70-D10 (1992)

Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feldman. 389, 764, 70-G7 (1992)

Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)

SUN: FLARES

Energy Propagation into a Flare Kernel during a Solar Flare. D. B. Melrose. 387, 403, 42-A1 (1992)

The Solar Flare Event on 1990 May 24: Evidence for Two Separate Particle Accelerations. H. Debrunner, J. A. Lockwood, & J. M. Ryan. 387, L51, 43-F7 (1992)

Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)

The 77 Day Periodicity in the Flare Rate of Cycle 22. T. Bai. 388, L69, 59-D3 (1992)

Taylor Relaxation of a Gold-Hoyle Flux Tube. G. J. Rickard. 389, 413, 65-A10 (1992)

Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)

What Caused an Unusually Broad He I 10830 Å Emission Line in a Solar Limb Flare? J. Q. You & G. K. Oertel. 389, L33, 66-E1 (1992)

- High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. Natalie Mandzhavidze & Reuven Ramaty. 389, 739, 70-E6 (1992)
- Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389, 756, 70-F11 (1992)
- Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feldman. 389, 764, 70-G7 (1992)

SUN: GENERAL

- Large-Scale Flows and Solar Luminosity Variations. S. Arendt. 389, 421, 65-B6 (1992)
- Preliminary Results of a Balloon Flight of the Solar Disk Sextant. E. Maier, L. Twigg, & S. Sofia. 389, 447, 65-D11 (1992)

SUN: INTERIOR

- Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)
- Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387, 707, 47-E1 (1992)
- Cosmological Density of WIMPs from Solar and Terrestrial Annihilations. Andrew Gould. 388, 338, 54-E5 (1992)
- Large-Scale Flows and Solar Luminosity Variations. S. Arendt. 389, 421, 65-B6 (1992)
- Further Improvements of a New Model for Turbulent Convection in Stars. V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1 (1992)

SUN: MAGNETIC FIELDS

- Structure of Sunspot Penumbrae: Fallen Magnetic Flux Tubes.

 Donat G. Wentzel. 388, 211, 51-E11 (1992)
- Taylor Relaxation of a Gold-Hoyle Flux Tube. G. J. Rickard. 389, 413, 65-A10 (1992)
- On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)

SUN: OSCILLATIONS

- Standard Solar Model. D. B. Guenther, P. Demarque, Y.-C. Kim, & M. H. Pinsonneault. 387, 372, 41-E9 (1992)
- Localized Excitation of Solar Oscillations. Philip R. Goode, Douglas Gough, & Alexander Kosovichev. 387, 707, 47-E1 (1992)
- On the Ultimate Accuracy of Solar Oscillation Frequency Measurements. K. G. Libbrecht. 387, 712, 47-E7 (1992)
- Chromospheric Dynamics Based on Infrared Solar Brightness Variations. G. Kopp, C. Lindsey, T. L. Roellig, M. W. Werner, E. E. Becklin, F. Q. Orrall, & J. T. Jefferies. 388, 203, 51-E1 (1992)

SUN: PARTICLE EMISSION

- Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)
- Superevents: Their Origin and Propagation through the Heliosphere from 0.3 to 35 AU. Wolfgang Dröge, Reinhold Müller-Mellin, & Edward W. Cliver. 387, L97, 48-E10 (1992)
- High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. Natalie Mandzhavidze & Reuven Ramaty. 389, 739, 70-E6 (1992)

SUN: PROMINENCES

Weighted Current Sheets Supported in Normal and Inverse Configurations: A Model for Prominence Observations. P. Démoulin & T. G. Forbes. 387, 394, 41-G5 (1992)

SUN: RADIO RADIATION

Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)

SUN: SOLAR WIND

- Connection between Ambient Density Fluctuations and Clumpy Langmuir Waves in Type III Radio Sources. P. A. Robinson, I. H. Cairns, & D. A. Gurnett. 387, L101, 48-F1 (1992)
- Variable Carbon and Oxygen Abundances in the Solar Wind as Observed in Earth's Magnetosheath by AMPTE/CCE. R. von Steiger, S. P. Christon, G. Gloeckler, & F. M. Ipavich. 389, 791, 71-B10 (1992)

SUN: SUNSPOTS

- Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)
- Structure of Sunspot Penumbrae: Fallen Magnetic Flux Tubes.

 Donat G. Wentzel. 388, 211, 51-E11 (1992)

SUN: TRANSITION REGION

- Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)
- On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)

SUN: UV RADIATION

- Solar Si II Line Ratios from the High-Resolution Telescope and Spectrograph. F. P. Keenan, J. W. Cook, P. L. Dufton, & A. E. Kingston. 387, 726, 47-F9 (1992)
- Ne v Line Ratios in the EUV Spectra of Solar Flares. F. P. Keenan, E. S. Conlon, L. K. Harra, K. M. Aggarwal, & K. G. Widing. 389, 440, 65-D1 (1992)
- On the Density and Field Sensitivities of Dielectronic Recombination. Daniel B. Reisenfeld, John C. Raymond, Albert R. Young, & John L. Kohl. 389, L37, 66-E5 (1992)
- A Rotating Tomographic Imager for Solar Extreme-Ultraviolet/Soft X-Ray Emission. Joseph M. Davila & W. T. Thompson. 389, L91, 73-F8 (1992)

SUN: X-RAYS, GAMMA RAYS

- Energy Spectra of Ions from Impulsive Solar Flares. D. V. Reames, I. G. Richardson, & K.-P. Wenzel. 387, 715, 47-E11 (1992)
- High-Energy Gamma-Ray Emission from Pion Decay in a Solar Flare Magnetic Loop. Natalie Mandzhavidze & Reuven Ramaty. 389, 739, 70-E6 (1992)
- Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389, 756, 70-F11 (1992)
- Variations in the Relative Elemental Abundances of Oxygen, Neon, Magnesium, and Iron in High-Temperature Solar Active-Region and Flare Plasmas. D. L. McKenzie & U. Feldman. 389, 764, 70-G7 (1992)
- A Rotating Tomographic Imager for Solar Extreme-Ultraviolet/Soft X-Ray Emission. Joseph M. Davila & W. T. Thompson. 389, L91, 73-F8 (1992)

TECHNIQUES: INTERFEROMETRIC

- The Structure and Dynamics of the Gaseous and Stellar Components in Centaurus A. Richard A. Nicholson, Jonathan Bland-Hawthorn, & Keith Taylor. 387, 503, 45-A1 (1992)
- Discovery of Extended Faraday Rotation Compatible with Spiral Structure in an Intervening Galaxy at z = 0.395: New Observations of PKS 1229-021. Philipp P. Kronberg, Judith J. Perry, & Edwin L. H. Zukowski. 387, 528, 45-C1 (1992)

TECHNIQUES: SPECTROSCOPIC

- Infrared Emission Spectra of Benzene and Naphthalene: Implications for the Interstellar Polycyclic Aromatic Hydrocarbon Hypothesis. Jerrell D. Brenner & John R. Barker. 388, L39, 52-D6 (1992)
- The Comet-Tail (A-X) System of CO+: Precise Molecular Constants of Its $X^2\Sigma^+$, $A^2\Pi_1$, and $B^2\Sigma^+$ States. C. Haridass, C. V. V. Prasad, & S. Paddi Reddy. 388, 669, 58-E1 (1992)

TELESCOPES

- The Snapshot Survey: A Search for Gravitationally Lensed Quasars with the Hubble Space Telescope. J. N. Bahcall, D. Maoz, R. Doxsey, D. P. Schneider, N. A. Bahcall, O. Lahav, & B. Yanny. 387, 56, 37-F6 (1992)
- Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4.
 C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)

TURBULENCE

Turbulence in Cooling Flows. Catherine F. Westbury & R. N. Henriksen. 388, 64, 49-G12 (1992)

- Proton Acceleration in Neutron Star Magnetospheres. I. A. Smith, J. I. Katz, & P. H. Diamond. 388, 148, 50-G7 (1992)
- Further Improvements of a New Model for Turbulent Convection in Stars. V. M. Canuto & I. Mazzitelli. 389, 724, 70-D1 (1992)

ULTRAVIOLET: INTERSTELLAR

xxxviii

- Dense Clumps of Ionized Gas near π Scorpii, as Revealed by the Fine-Structure Excitation of N II. Frank Bertoldi & Edward B. Jenkins. 388, 495, 56-D9 (1992)
- The Structure of the Inner Arcsecond of R Aquarii Observed with the Hubble Space Telescope. Denis Burgarella & Francesco Paresce. 389, L29, 66-D10 (1992)

ULTRAVIOLET: SOLAR SYSTEM

Steady Siphon Flows in Closed Coronal Structures: Comparison with Extreme-Ultraviolet Observations. G. Peres, D. Spadaro, & G. Noci. 389, 777, 71-A8 (1992)

ULTRAVIOLET: STARS

- Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)
- Improved Calculations for the C III λλ1907,1909 and Si III λλ1883,1892
 Electron Density Sensitive Emission-Line Ratios, and a Comparison with IUE Observations. F. P. Keenan, W. A. Feibelman, & K. A.
- Berrington. 389, 443, 65-D5 (1992)
 Fe II Fluorescence and Anomalous C IV Doublet Intensities in Symbiotic Novae. A. G. Michalitsianos, M. Kafatos, & S. R. Meier. 389, 649, 69-D12 (1992)
- New Calibrators for the Cepheid Period-Luminosity Relation. Nancy Remage Evans. 389, 657, 69-E8 (1992)

ULTRAVIOLET: SPECTRA

Spatially Resolved Ultraviolet Spectroscopy of the Liner Galaxy NGC 3998. G. A. Reichert, G. Branduardi-Raymont, A. V. Filippenko, K. O. Mason, E. M. Puchnarewicz, & C.-C. Wu. 387, 536, 45-C11 (1992)

X-RAYS: BURSTS

- Light Curves of Rotating, Oscillating Neutron Stars. T. E. Strohmayer. 388, 138, 50-F9 (1992)
- CNO Destruction by Spallation and Type I X-Ray Bursts. Jason C. Tillett & James MacDonald. 388, 555, 57-B7 (1992)
- The X-Ray Outburst from X0115+634 in 1990 February. Keisuke Tamura, Hiroshi Tsunemi, Shunji Kitamoto, Kiyoshi Hayashida, & Fumiaki Nagase. 389, 676, 69-G1 (1992)
- Characteristics of Hard X-Ray Spectra of Impulsive Solar Flares. G. A. Dulk, A. L. Kiplinger, & R. M. Winglee. 389, 756, 70-F11 (1992)

X-RAYS: GALAXIES

- Interstellar Matter in Early-Type Galaxies. II. The Relationship between Gaseous Components and Galaxy Types. Joel N. Bregman, David E. Hogg, & Morton S. Roberts. 387, 484, 44-F9 (1992)
- X-Ray Properties of Bright Far-Infrared Galaxies. L. P. David C. Jones, & W. Forman. 388, 82, 50-B4 (1992)
- Where Have All the Cluster Halos Gone? Jack O. Burns, Martin E. Sulkanen, Galen R. Gisler, & Rick A. Perley. 388, L49, 59-B1 (1992)
- The X-Ray Spectra of High-Luminosity Active Galactic Nuclei Observed by Ginga. O. R. Williams, M. J. L. Turner, G. C. Stewart, R. D. Saxton, T. Ohashi, K. Makishima, T. Kii, H. Inoue, F. Makino, K. Hayashida, & K. Koyama. 389, 157, 62-A5 (1992)
- EXOSAT Observations of the Broad-Line Radio Galaxy 3C 382. K. K. Ghosh & S. Soundararajaperumal. 389, 179, 62-C1 (1992)
- The Properties of X-Ray Selected Active Galactic Nuclei. II. A Deeper Look at the Cosmological Evolution. Roberto Della Ceca,

- Tommaso Maccacaro, Isabella M. Gioia, Anna Wolter, & John T. Stocke. 389, 491, 67-E8 (1992)
- X-Ray-emitting Filaments in the Cooling Flow Cluster A2029. Craig L. Sarazin, Robert W. O'Connell, & Brian R. McNamara. 389, L59, 73-C8 (1992)

X-RAYS: GENÉRAL

- On the Optical Counterpart of 1E 1207.4-5209, the Central X-Ray Source of a Ring-shaped Supernova Remnant. Giovanni E. Bignami, Patrizia A. Caraveo, & Sandro Mereghetti. 389, L67, 73-D5 (1992)
- X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line. R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, S. Grebenev, R. Kremnev, K. Sukhanov, A. Goldwurm, J. Ballet, B. Cordier, J. Paul, M. Denis, G. Vedrenne, M. Niel, & E. Jourdain. 389, L75, 73-E1 (1992)
- SIGMA/GRANAT Soft Gamma-Ray Observations of the X-Ray Nova in Musca: Discovery of Positron Annihilation Emission Line. A. Goldwurm, J. Ballet, B. Cordier, J. Paul, L. Bouchet, J. P. Roques, D. Barret, P. Mandrou, R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, V. Kovtunenko, R. Kremnev, & K. Sukhanov. 389, L79, 73-E6 (1992)

X-RAYS: INTERSTELLAR

A New Scheme for Multidimensional Line Transfer. II. ETLA Method in One Dimension with Application to Iron Kα Lines. John I. Castor, Pieter G. Dykema, & Richard I. Klein. 387, 561, 45-F1 (1992)

X-RAYS: SOURCES

The Semicircular Shell of CTB 109. Zhenru Wang, Quinyue Qu, Ding Luo, Richard McCray, & Mordecai-Mark Mac Low. 388, 127, 50-E10 (1992)

X-RAYS: STARS

- Properties of the Massive X-Ray Binary 4U 1700-37 = HD 153919. S. R. Heap & M. F. Corcoran. 387, 340, 41-B11 (1992)
- X-Ray Activity as Statistical Age Indicator: The Disk G-K Giants. G. Micela, A. Maggio, & G. S. Vaiana. 388, 171, 51-B5 (1992)
- Energy Dependence of Normal Branch Quasi-periodic Intensity Oscillations in Low-Mass X-Ray Binaries. Guy S. Miller & Frederick K. Lamb. 388, 541, 57-A5 (1992)
- Time Variability Studies with Photon-counting Imaging Detectors. I. A Maximum Likelihood Technique. S. Sciortino & G. Micela. 388, 595, 57-E11 (1992)
- ROSAT X-Ray All-Sky Survey Observations of Hybrid Stars. Bernhard Haisch, J. H. M. M. Schmitt, & C. Rosso. 388, L61, 59-C7 (1992)
- Hard X-Ray Imaging of the Galactic Black Hole Candidate GX 339-4.
 C. E. Covault, J. E. Grindlay, & R. P. Manandhar. 388, L65, 59-C12 (1992)
- Stellar Wind Collision and X-Ray Generation in Massive Binaries. V. V. Usov. 389, 635, 69-C10 (1992)
- X-Ray Scattering and Fluorescence in the Wind of a Massive X-Ray Binary. W. Lewis, S. Rappaport, A. Levine, & F. Nagase. 389, 665, 69-F3 (1992)
- H0538+608 (= BY Camelopardalis): An Asynchronously Rotating AM Herculis Binary? A. Silber, H. V. Bradt, M. Ishida, T. Ohashi, & R. A. Remillard. 389, 704, 70-B7 (1992)
- X-Ray Nova in Musca (GRS 1124-68): Hard X-Ray Source with Narrow Annihilation Line. R. Sunyaev, E. Churazov, M. Gilfanov, A. Dyachkov, N. Khavenson, S. Grebenev, R. Kremnev, K. Sukhanov, A. Goldwurm, J. Ballet, B. Cordier, J. Paul, M. Denis, G. Vedrenne, M. Niel, & E. Jourdain. 389, L75, 73-E1 (1992)

